G. R. S. IX-5]

*Previous references.*

Increase

File No. 83 – 17

1917

( LB )

Serial Nos. 1–16, 18, 20
22–26, 34
39 & 40

*Later references.*

VP 64-31-1, 2

# GENERAL AND REVENUE SECRETARIAT.

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*Serial Nos.* 1–16, 18, 20, 22–26, 34 & 40

**Part B for** May 1919

---

SUBJECT.

Water Supply to Kolar Gold Fields

---

From the Secretary K. G. F. Mining Board
Dated 22. 1. 18

Makes a representation on the question of assuring a pure water supply to the Kolar Gold Fields

G.O No 4404-8. LB 83-17-23 of 18-9-18.
Sanctions the proposal of the Dy Comm^r to sink 26 new wells in the 21 villages on the Palar at a cost of Rs 7010/- to be met from the Drinking water Wells Funds.

P. T. S.

W D 1250—GPB—30,000—28-1-19

Other matters referred to in this file have been dealt with and disposed of ~~in~~ seperately in the same file.

M K Garcia
12/10/19

G. R. S. 11] 1917-1918

GENERAL AND REVENUE SECRETARIAT.

( LB. )

NOTES.

File No. 8347

FILE HEADING.

Water supply to the Kolar Gold Fields

From

| No. | Dated | Received |
|---|---|---|

| Diary No. | Enclos. | Spare Copies. | Serial No. |
|---|---|---|---|

BRIEF ABSTRACT OF LETTER.

NOTES AND ORDERS.

NOTES—First Sheet.

To 2119 Jun 12.
49-18

D 1842

W. D. 2725—GPB—2,000—5-5-16

REPLY.

*(To be written on this margin.)*

# Office of the Dewan of Mysore.

NOTE.

*Dated*.....2nd February.....*1918*

Draft of a letter to Mr. G.E. Payne, Secretary, The Kolar Gold Field Mining Board, Oorgaum, about the measures necessary to assure a supply of pure water to the Gold Fields.

---

2. The Chief Secretary should, after issue, take all necessary action so as to get recommendations from all officer concerned within a definite period under the orders of the Member of Council. If there is anything that the Dewan has to do, the Chief Secretary may come up to him with notes for consultation.

3. Rough proposals should be ready within three months.

2.2.18

4. Chief Secretary.

5. Action to be taken

1. Ch-Engr Sani Comm, Rev Comm & Dy Comm have to be consulted as to
(a) measures to be taken, if any,
(b) cost of same & how to be met.
Copies of the representation shd be sent to these officers for report within a month. ie - by 5th March 18.
2. After considering opinions expressed joint discussion maybe necessary.
3. Mining Bd. may have to be asked to pay. This maybe considered in due course

6. The case maybe dealt with in Br IV, Assistant (who will note this as an urgent case to be watched. CS. will also cover ? the memo + remind.

Copy taken
Hrs
4/2

WD 1233—GPB—60,000—1-12-16—S.

(3

G. R. S. III-2]

General and Revenue Secretariat.

File No. LB 83 of 1917

| Serial No. | |
|---|---|
| 1 | From<br>The Secretary, Kolar Mining Board<br>Dated 22.1.1918<br><br>Representation on the question of assuring a pure water supply to Kolar Gold Fields |
| 2. | To<br>The Secretary<br>Mining Board<br>No. 4368 dt 5.2.1918<br>Acknowledges the above |

NOTE—Contn. sheet.

D.1842

WD 1233—GPB—60,000—1-12-16—S.

(49)
(4)

G. R. S. III-2]

General and Revenue Secretariat.

File No. LB 83 of 1917

| Serial No. | |
|---|---|
| | 7. Submitted with drafts as directed by the Secretary on page 2<br>SHH BNR 5/2/1918.<br>I Sheet MC 6/2 |
| 3 | To<br>The Chief Engineer<br>The Sanitary Commr.<br>The Rev. Comm.<br>The Dy Commr. Kolar &c<br>No. 4426-9 dy 7.2.1918<br>Forwards a copy of the representation and calls for a special report before 1st March 1918 |
| 4 | From<br>The Sanitary Commissioner in Mysore<br>No. GC 357 dy 2.2.1918<br>Submits his ~~opinion~~ recommendations regarding the measures to be adopted to improve the quality of the water on the Kolar Gold Fields<br>8. Submitted for perusal.<br>SHH 8/2/1918 9. The means suggested by the chief medical officer for the improvement of the water supply are summarised in para 6 of the sanitary commrs letter<br>8/2 10. The sanitary commr considers that ~~the Subject~~ the shifting of the villages is out of the question as |

NOTE—Contn. sheet.

WD 1233—GPB—60,000—1-12-16—S.



G. R. S. III-2]

General and Revenue Secretariat. | File No. 83 of 1917.

Serial No.

the cost is prohibitive and the work unnecessary.

(2) He proposes that the villages in question should be constituted into a special area and placed under a San' Insp'r. This may be done if the San'y B'd are prepared to meet the pay of the San' Insp'r.

(3) He further proposes that cultivation within 2 furlongs of the stream may be stopped. The cost of this proposal and the annual loss to Govt. in the shape of land revenue will have to be ascertained. The D.C. may if approved be asked to report on the matter.

(4) Proposals may be obtained from the Sanitary B'd as regards sinking of wells in these villages and the cost met out of Dev. wells fund.

(5) The Chief Engineer may be requested to report whether any action has been taken regarding the removal of sand to the pits.

The other points do not call for any remarks. Submitted for orders. Reports are still due from Rev Comm', Dy Comm', Chief Insp. Sanitation on the representation made by the Secy Mining Bd. in the same matter.

MK

10. Chief Secy) This report has been received independently of the reports made from the Secrett. 3/2

The reports from the Ch-Insp, Rev Comm & the Dy Comm may be awaited. [They may be reminded]

Meanwhile this report may be perused.

CBK 18/2/18.

Extraordinary Member
2nd Member

CBK 18/2/18

NOTE—Contn. sheet.

WD 1233—GPB—60,000—1-12-16—S.

1842 (6

G. R. S. III-2]

General and Revenue Secretariat | Lb File No. 83 of 1917.

Serial No.

1. I agree that the reports from the other officers consulted may be awaited.

2. In the meantime, it may be ascertained whether action has been taken to renew the sand in the filters and whether after the renewal, any improvement has been found in the water.

21.7.18.

3. Assistant Engineer
Assistant
27/7/18

WD 1233—GPB—60,000—1-12-16—S.

(7

G. R. S. III-2]

General and Revenue Secretariat.

File No. LB 83 of 1917

| Serial No. | |
|---|---|
| 5 | From<br>The Sanitary Commissioner<br>No. G.C. 357-1 dt 11.2.1918.<br>Invites reference to his No. G.C.357 dt 2.2.18 |
| 6. | From<br>The Sanitary Commissioner<br>No. GC 257-6 dt 13.2.1918<br>States that the system of Ultra-Violet Ray treatment may be adopted on the Kby F. water supply with advantage and that he has called for a rough estimate of the cost from the Dy Commr.<br>14 The previous papers were submitted to Chief Secy on 13.2.18. Subd in continuation<br>SHH 18.2.18.<br>15 Subd for information.<br>18.2.18<br>18/2<br>Chief Secy |
| 7 | From<br>The Chief Engineer<br>No. 2298 dt 20.2.1918<br>States that the Superintending Engineers report on the arrangements made for the removal and renewal of the Sand in the filters is awaited in his office |

NOTE—Contn. sheet.

P.T.O.

2092

WD 1233—GPB—60,000—1-12-16—S.

(8)

G. R. S. III-2]

General and Revenue Secretariat.

LB File No. 82 of 1917

| Serial No. | |
|---|---|
| 8. | From The Revenue Commissioner in Mysore<br>No C.2926 & 22/28.2.1918<br>Submits the report called for<br>in SC No 3 |
| 9 | From The Deputy Commissioner, Kolar &<br>No Reg Hc. 580 & 26/28.2.1918.<br>—— do ——<br>16. A statement showing the<br>measures suggested by the Mining Board<br>and the recommendations of the<br>Secy. Commr., Chief Engr. Rev. Commr. &<br>the Dy Commr. is put up<br>Subd for orders.<br>4.3.18. |

Note—Contn. sheet.

Statement showing the measu
supply of more wa

| Suggestions of the Mining Board (Chief Medical officers proposals). | Sanitary Commissioners remarks | Chief Engineer's opinion remarks |
|---|---|---|
| 1) Wet cultivation to be prohibited to within half a mile of the banks of the tank and River; or as an alternative digging of a deep & wide trench to allow natural filteration. | 1 Considers that such drastic measures are not necessary. 2. Villages might be constituted into a Special area & placed under a Sany. Inspector. 3. Wet cultivation within 2 furlongs may be stopped. | No opinion |
| 2) Removal of certain villages | (1) — do — | do |
| 3) Villages with no water supply, or an inadequate one, to be fully supplied | 1) Sinking of new wells should receive attention by the Dt. Bd. & the Village Supply Committee | do |
| 4) Coagulating tanks to be doubled in capacity | Not in favour of increasing the capacity. | do |
| 5) Better Supervision of filters in cleaning & overlooking and examination of the pipe line | Renewal of the sand in the filters will improve the filtered water. | Has arranged for the removal and renewal of the sand in the filters and awaits a report from the Sup? Engr |
| 6) Reservoirs at Champion Reef to be made cat and bird proof (states this has been done) | Have been rendered cat and bird proof | |
| | The adoption of Ultra-violet Ray treatment on the Kly & water supply will lead to good results. | |

4/7/1918

ures to be adopted to secure a
ly to the Kolar Gold Fields

| Revenue Commissioner's remarks | Deputy Commissioner's remarks. |
|---|---|
| Drastic measures as entailing not only hardship to villagers, but also uncalled for and heavy expense to Govt. | 1) Wet lands on exchange could not be given to women beaver cots<br>2) People are unwilling to move |
| agrees with the D.C. that wholesale removal of villages are drastic measures. | measure involving considerable hardship |
| No opinion | Has called for information as to the number of wells that are required in each village. |
| | Has called for a note prepared by the Jewel Filter Co re. installation of their filter |
| | The fitter employed by the Water Works Department may be placed under the control of the Sanitary Board |
| Ultra-Violet treatment is the proper remedy if the plant could be got and the Deptt are satisfied with its working | 1) The ultra-violet ray treatment will be very troublesome<br>2) The Pumping plant may be electrified. |
| Proposes to call a meeting of the Ch. Engr. Sanitary Comr. & the D.C. discuss the details Govt to wish | |

ND 1233—GPB—60,000—1-12-16—S.

(10

G. R. S. III-2]

General and Revenue Secretariat. | File No. 87 of 191 )

Serial No.

17. The Statement sent with Contains in regard the Suggestions made in Connection with the proposals for a power Supply q parts & K.S.7

Immediate action is necessary only in respect q items (3) & (5). The offices concerned have been addressed by the Heads q depts Concerned

As regards adoption q the ultra violet ray treatment, the question may be Separately dealt with when a Complete Scheme is Submitted

A reply, if any, may be sent & the Secy, Planning Board detailing the action that has so far been taken and the further investigation action that is proposed & be taken up

Does not seem to be necessary
6/3

MK
5/3

Chief Engr)

18. The further report q the Dr about the proposed Ultra-violet rays treatment may be awaited.

The Chief Engineer is taking action about renewing the Sand in the filters. The result q this may also be awaited

Extraordinary member
2nd member

19. Further reports may be awaited

5/3/18
MK

8.3.

NOTE—Contn. sheet.

55.
18.3.18

20 Have reports been received now- if not required now
16/3

D 1253—GPB—6C,CCO—1-12-16—S.

G. R. S. III-2]

General and Revenue Secretariat. | L/S File No. 882 of 1917

(11

Serial No.

4. I shall deal with this in the usual note I make after all the papers and documents regarding my note (extract) may be put in the file - and final orders then passed - by the Executive members — as he may deem fit

22. The 2nd member's inspection note may be awaited

23/3/18

Flag 7.

Sub?

23 X copies of G.O. N. 1363-65/882-102-17-1 dt 5.4.18 containing orders on the 2nd Member's inspection notes is put up. It will be seen from item 6 in the responsibility sheet attached thereto that the time limit fixed for completion is 30.6.1918. Action will be taken to get complete information on all the bonds before the due date.

2a In the meanwhile the file is submitted as per Dewan Saheb's orders in para 3 above.

1/5/18 Submitted for perusal

2/5/18

Noted 2/5/18

NOTE—Contn. sheet.

WD 1233—GPB—60,000—1-12-16—S.

(12

G. R. S. III-2]

| General and Revenue Secretariat. | LB File No. 82 of 1917. |
|---|---|
| Serial No. | Submitted Dewan Sahet for perusal. Papers will be attached<br>MC<br>3.5.1918 |
| 5748<br>3.5.18. | Dewan) |
| A reminder is called & Dy Reminder<br>Bk<br>14/7 | The chief Engineers opinion may be obtained early & further action necessary taken<br>12.7.18<br>13/7 |

2-7524

63

G. R. S. III-2]

General and Revenue Secretariat | LB File No. 83 of 1917

Serial No.

10 S.O. No. G 13632-47/Genl 102-77-17 5/4/-

Issues responsibility Sheet in respect of the questions referred to in the notes made by the second Member of Council during his tour in the Kb. D.

main file re:

1. The Water Supply question (referred to in Sl No. 6 of the S.O.) was submitted to Dewan on 3.5.1918 Drafts subd to the Officers noted on the Sl. Sheet.

4/5/1918.

2. Reports are called for from the several Divns & the Revsec's has been included in the list for watching the progress of the case. The Asst may issue ~~a Circ~~ as it will enable us to know what is being done in the Dept. items included in Sl No 6 subd for perusal & signature

MK 7/5

Revsec 3. 9.5.18 MK

11 To The Chief Engineer
The Sanitary Commr.
The Deputy Commr. Kb & Lar
No. 6381-3 dt 11.5.18

Requests to intimate the action taken in respect of the items mentioned in the responsibility Sheet

NOTE—Contn. sheet.

WD A 1789—GPB—60,000—20-8-18—SL

G. R. S. III-2]

General and Revenue Secretariat.

Lb File No. 83 of 1917 14

| Serial No. | |
|---|---|
| 12 | From The Sanitary Commr<br>No. Gc 432-2Dj 1.5.18<br>Requests to be informed whether the the action proposed in GO No. G. 13632-47/Sec. 102-17 Dt. 5.4.1918 should be treated as final orders passed on his recommendation on the subject<br>4. The file containing the recommendations of the Sanitary Commissioner together with a copy of the GO was submitted to Dewan on 3.5.1918<br>Submd for order<br>8 HP 13/5/1918<br>5. Please await return of the file for a week. ~~and then obtain it of~~<br>14/5 |
| 13 | From The Sanitary Commissioner in regn<br>No. Gc. 432-10 Dj 22.5.18<br>Submits a statement showing the stage at which the several questions mentioned in the responsible sheet stand.<br>6. The receipt of information from the Chief Engineer & the Dy Comm. Kolar has to be awaited before final orders can be passed<br>8 HP 31/5/18 |

NOTE—Contra. sheet.

WD A 1789—GPB—60,000—20-3-18—S.

G. R. S. III-2]

3157

18

General and Revenue Secretariat.

File No. 83 of 1917

| Serial No. | |
|---|---|
| | 7. Items 2 & 3 in the statement sent by the Sanitary Engineer are marked "Please ascertain informally from the P.W.D. Secy. whether any proposals for the formation of the proposed harbour have been received" DMK 1/6 |
| 14. | From the Deputy Commr. Kolar No. 751 dt 30.5.1918 forwards copy of his letter to the Rev. Comr. re the matter of ensuring a pure supply of water to Kolar. |
| 15. | From the Chief Engr. No. 6651 dt 1.6.1918, forwards copy of his letter to the Sanry Commr. on the subject. |
| | 8. With regard to item No 1 mentioned in the Responsibility Sheet viz "A more satisfactory arrangement for looking after the pumps & filters", the Chief Engineer states that there is a qualified staff on the spot and that adequate provision has been made for |

NOTE—Contn. sheet.

W1) A 1789—GPB—60,000—20-8-18—S.

Serial No.

all the requirements. He also proposes that the Ex. Engr. Water Supply Dn + the Medical Officer be requested to inspect the pumps and filters once a month + to submit a report

Re. Item No 2, viz Constituting the Villages into a Separate area + providing wells" the Deputy Commr. promises to submit the Board's decision for appointing a Separate Sanitary Inspector for the area early and also definite proposals for sinking wells after collecting the necessary information

Re: Item No 3 viz "Appointing a Separate Committee +c" the Chief Engineer states that a set of rules to regulate inspection is necessary before the Committee is asked to meet. The Sanitary Commissioner has arranged to get these rules from the Health Officer. He is of opinion that Dr. O'Donnel may be one of the Committee members.

As

The chief Engr. may kindly instruct the Exn. Engineer & inspect the pumps &c. The Surgeon General may be requested & issue instructions to the medical officer.
If it is a joint inspection a G.O. may issue

MK

The Board's resolution may be awaited.

MM

The rules and definite proposals for the formation of the Committee may be awaited.

MM

NOTE—Contn. sheet.

WD A 1789—GPB—60,000—20-3-18—S.

Mr Chandrasekhara Aiyar

Subject

It may perhaps be desirable to submit these papers to Dewan for information & orders

17/6/08

Not now not necessary

This is a case for watching monthly progress, when progress is slow, the papers may be sent to Dewan Sahib for perusal

G. R. S. III-2]

3123

General and Revenue Secretariat.

LB File No. 83 of 1917.

Serial No.

As regards item No (4) viz further investigation of Ultra Violet treatment the Sanitary Commissioner states that Mr. Forbes has the matter in hand. The Shimoga Koyalodda Scheme is stated to have been sanctioned in G.O. No. R 10092-3/LR 2-15-297 dt. 5 Apl. 1918 The Sanitary Commr. does not for increasing the capacity of coagulating tank.

The Chief Engineer has offered no remarks with regard to item No. 5 viz Renewal of the pump

The Sanitary Commissioner has reported that the alum now supplied has been good

The previous papers submitted to Dewan on 3.5.1918 on the subject have not been returned with orders

Submitted

8/6/1918 4. Submitted for perusal

10/6/1918 Further inputs may be awaited, and action taken according to the needs of the case

NOTE—Contn. sheet.

Rec'd) Seen

The matter should be kept up as a special case till we get a final decision and both sight & site of the pump in the premises

11/6

2nd Member

11.6.18

WD. A 1955—GPB—10,000—2-3-18—S.

236
12-6-18.

G. R. S. III-2

General and Revenue Secretariat.

File No. 53 of 1917

| Serial No. | |
|---|---|
| 16. | Letter No. L.A.C. 18 2.7.18 from the Dy Comm.r, Kalar dtd<br>States that the District Board of Kalar are not willing to hand over the jurisdiction of the villages in the Palaces to Batamangala to the Sanitary Board and that they will take useful steps to constitute them into a special Sanitary area and provide them with wells and that to do so, an establishment at a recurring cost of Rs 93/- under the control of the District Sanitary officer is necessary and requests Sanction thereto.<br><br>11. Under Section 7 clause (f) of the L. B. Regulation, it is the duty of the District Board to make necessary provision for the proper sanitation of the area under its control. But it is not clear under what provisions of the said Regulation it can propose the Constitution of the said area into a special Sanitary one. If necessary it ~~can~~ may employ ~~a special staff~~ with the Sanction of Govt a special staff to conserve the area spec |

NOTE—Contn. sheet.

G. R. S. III-2

General and Revenue Secretariat. | File No. 53 of 1917

Serial No.

12 The establishment proposed in this Connection as well as for safe guarding the Kolar Gold field Water Supply is as follows:-

| | Rs |
|---|---|
| 1 Sanitary Inspector on Rs 30-2-40 + 20 horse allowance | 50 |
| 1 Maistri on Rs 11/ | 11 |
| 4 Sweepers on Rs 8/- each | 32 |
| Total Rs | 93/ a month |

13 It is stated that the above staff may be work under the Control of the District Board and the District Sanitary Officer of Kolar and that the Dist Board have to agree to bear the Cost of the establishment.

14 As regards the sinking of wells in the villages in question, Govt have already sanctioned a ~~X~~ State Grant of Rs 10000/- (Rs 2 out of for the Kolar Dist) out of the Drinking Water Wells Fund for this purpose for expenditure during the current year (vide G.O. dt. 6700-9/LB. 72-17-343 28th May 1918).

B

15 The Dy Comr has already suggested in the last para of his letter No. 217/A.1 of 17-18 of 13th April 1918, that the entire Cost of sinking wells in the said villages should be borne by Govt as the Contemplated from the

C

NOTE—Contn. sheet.

G. R. S. III-2

General and Revenue Secretariat. | G/S File No. 53 of 1917.

Serial No.

from the villagers is not forthcoming and Sanction of Govt to the Sch is now sought for.

16 Proposals for the appointment of a Committee to inspect the Water Works of the Fields are still due from the Sanit. Commr. who was reminded of the same only yesterday.

Submitted for orders.

9.7.18

17 The letter of the Dy Commr explains the view taken by the Dist Bd. regarding the question of improving the sanitation of certain villages on the Palar with a view to protect the water-supply to the K.G.F Sanit Board & orders are sought for on the following 3 points

(1) Constituting the 21 villages noted in the plan into a special sanitary area"

(2) Entertainment of a special staff at a monthly cost of Rs 93/- for the Supervision of the above area out of Dt funds.

(3) Sanction to the Distt. Bd carrying out the works in the area entirely at Govt. Cost from the drinking water works Fd.

It is not clear why any distinct name

NOTE—Contn. sheet.

Serial No.

Should be given to the area in question if the administration of the area is to continue to be under the Dt Board. It will no doubt be pointed out that the area should be treated as a special one as a separate establishment will look after it and that, for special reasons. Since this is so, and some special attention is to be paid to it for Sanitary reasons viz, protection of the sanitation and water-supply of the K.G. 7 area, it is only fair that the financial responsibility should be shared also by the body for whose benefit these special measures are necessary. The Dt. Board has evidently consented to bear the entire cost of the special establishment for fear that otherwise the area in question would be taken out of the jurisdiction of the Dt Bd. of course there need have been no apprehension in this connection for mere sharing of cost does not vest any control in the body so paying. Besides the Dt Bd. agreeing to bear the entire cost is not a fair solution of the question as this will practically mean giving preferential treatment to a few specified villages at the expense of the others in the district. As the K.G. 7. area is benefited to a large extent by the proposed arrangements the sanitary staff

(comprising the 21 villages)

NOTE—Contra. sheet.

Serial No.

Contribute a mark of the cost of the Establ at least, the Control over the area continuing to vest in the Distt. Board. The Hy. & San. Bd may then be consulted as to whether they are prepared to contribute towards the cost of the Establ.

18) As regards sinking of ~~wells~~ wells in these villages entirely at Govt. cost, it is submitted that it would have been better if the D.C. had submitted more definite information showing the number of wells now existing, the number of wells required and the probable cost of constructing them &c. As a special case however there appears to be no objection to sanction the construction of wells required at Govt cost as this is in the interests of the health of the San. Bd area with a large floating population - a matter requiring the careful attention of Govt always and special attention during inter-bourne epidemics. Subd for orders

MK 12.7.18

Rev Secy) 18) I agree - hm 13.7.18 MK ~~hm 13.7.18~~

F. 2nd member)

12. 11.7.18.

19) The observations made by the Revenue Commissioner himself are out of the question may be addressed next on the lines indicated.

Pell 16.7.18

hm

Draft MK 16/7

NOTE—Contn. sheet.

WD A 1789—GPB—60,000—20-2-18—S.

G. R. S. 12 ]
General and Revenue Secretariat.

GB · File No. 83 of 1917 23

Serial No.

20) Submitted with draft for appl.
20.7.18

21) Please see draft-revised. Put up a clean copy.
MK 24/7

22) Fair copy of the Dft put up
25/7/18

23) For favour of perusal & approval
MK 25.7.18

Revised)

24) Issue
26-7-18

X. From
The Secy. Govt with the Govt
No. G.C. 12-9 of 17-7-18.
Submits a copy of D.O. letter No. C. 11 of 10-7-18 from the D.C Kolar &
2 draft Rules for the periodical inspection of the Bethamangala Water Supply.

18
17. To
The D.C. Kolar &
No. 1726 of 27-7-18
Enquires why a special name should be given to the 2 villages in question on the Palar River & Wh

Not found in the file
Seems found on some other file on the subject & sent up in this file

NOTE—Contn. sheet.

G. R. S. III-2j

General and Revenue Secretariat. | LB File No. 83 of 191-

| Serial No. | |
|---|---|
| | The Sanitary Board K. G. F. should not bear a portion of the cost of establishment entertained for the protection of the circulation and water supply of the K. G. F. &c and calls for further details regarding the wells to be sunk in the aforesaid villages |
| 19 | |
| 18 | From the Sanitary Comr. No G. C. 12-7 & 12-7-18 Submits a copy of the draft Rules pertaining to the periodical inspection of the Bethamangala Water Works. |
| | With the Collection containing 5L 36 of LB 83-17 |
| 17 | From the Sanry. Comr No G. C. 12-7 & 17-7-18. Submits a copy of D.O. letter No C 1/8 & 10-7-18 from the D.C. Kolar &t regarding the Draft Rules said above. |
| | With the Collection Contg 5L 36 of LB 83-17 |
| 20. | From Ch. Engineer No. 8012 & 4/5-7-18. Reminds |
| | 25) The appointment of a Committee for the periodical inspection of the Bethamangala Water Works, was one of the 6 items of action measures about which immediate |

NOTE—Contn. sheet.

G. R. S. III-2j

General and Revenue Secretariat. | LB File No. 83 of 1917.

Serial No.

7

H. U.

H. S.

Recd. 2.8.18

NOTE—Contn. sheet.

steps were found necessary in order to secure a supply of pure water to the K. G. F. [vide item no. 3 in cl. 4 of Sl 6 of the correspondence sheet issued under G.O. no 13632-47 Genl. 10-11-1 & 5-4-18]. The Sanitary Comr. suggested that, before the appt of a committee, there should be a set of rules to regulate their inspections and accordingly he now submits a set of draft rules

26) He says he had sent a copy of these rules to the Dy. Comr. Kolar Dt. and the Chief Engr for remarks, if any, they have to offer regarding the rules. The D.C. Kolar, furnishes his opinion. The Chief Engineer is also expected to offer his remark, ~~if any~~ may be. his reply ~~may~~ be awaited?

Subd. 27) Yes. Remand sanction or Chief Engr. after a week.

31/7/18

2/8/18

28) Draft reminder subd as directed above

29/8/18

1/8/18.

15/8/18

G R. S. III-2j

General and Revenue Secretariat. | LR. File No. 83 of 191

| Serial No. | |
|---|---|
| 21 | To The Secy. Govt. in Irrigation No. 2761 dt 19.8.18. Requests him to obtain the Chief Engineers opinion on the draft Rules and forward it to Govt |
| 22 | From the Dy. Comr. Kolar dt No. L.F.C. No. 1/18-19. dt 19/20-8-18. With reference to the enquiries made in Sl. 18 above, States that the matter will be placed before the Secy. Bd. F.G.F. and their views on the matter will be intimated after the meeting of the Bd. is over. And with regard to the last para of the dl., Calling for detailed information regarding sinking wells in the villages in question, he submits a statement showing the existing source of water supply in those villages, the number of new wells required and their estimated cost. |
| 30) | Kind reference to para 18 on page 22 of the notes is invited. |
| 31) | According to the statement now subd. by the Dy. Comr. 26 wells are to be newly constructed at a cost of Rs. 7010 in the 21 villages on the Palar river. Subd. for orders. 24/8/18 |

Enclosure to p.U.D

NOTE—Contn. sheet.

G. R. S. III-2]

General and Revenue Secretariat. | LB File No. 83 of 1918.

Serial No.

32 Please note what amount is available for in the K. Nandisth under the Drinking water scheme Fund?

MK
18/8

Statement of progress D. W. W. in Kolar dt. during the quarter ending 20-6-18 H. V. H. C.

33 The opening balance on 1-7-1917 was Rs. 40281 to which was added a sum of Rs. 20000/- sanctioned in G. O. No. 6700-9 L. B. 72-17-34 dt 28-5-1918. The total amount at the credit of the Fund was, therefore, ~~Rs.~~ Rs. 60281 exclusive of the contributions by villages.

34 A sum of Rs. 7332-1-0 was actually spent on the works during the four quarters as noted below:

H. N. Rs. 390 was spent during the quarter ending 30-9-1917.

H. P Rs. 311-4-4 " " 31-12-1917

H. R Rs. 105-0-0 " " 31-3-1918

H. V Rs 6525-12-8 " " 30-6-1918

7332-1-0

35 After deducting this amount of Rs. 7332-1-0 there remains a balance of Rs. 52958-15-0, out of which perhaps, a sum of Rs. 33420 will have to be set apart towards the

Est. 5 a H V

NOTE—Contn. sheet.

G. R. S.-III-2]

General and Revenue Secretariat. | 18 File No. 83 of 1917.

Serial No.

estimated cost of the well works in progress. Even then there will be a sum of Rs 19538-15-0 available in the Kolar District under the drinking water wells ~~works~~ Fund

36 The above figures have been taken from the statements of progress in the drinking water well works furnished by the President of the Dist. Board, in respect of the four quarters in the year 1917-18.

30/8/18

37) The present communication from the D.C. is a reply to the reference made in accordance with the orders contained in para 19 supra and reference is invited to Flag 7 Provision of wells to the villages in question is one of the items included in the notes of inspection by the members of Council As a special case sanction may be accorded to the construction of wells in these villages out of Govt. funds. The total cost is only about Rs 7000/- and there is a large amount available under the D.W. wells Fund

38) In this connection, it is submitted that this procedure necessarily cumbersome

NOTE—Contn. sheet.

WD A 1789—GPB—60,000—20-3-18—S.

G. R. S. III-2

General and Revenue Secretariat. | L.B. File No. 83 of 1917.

Serial No. 24.

From the Chief Engineer for Irrigation. Memo no. 10430 dt 28-8-18.

With reference to this office letter no 1295 dt 1-8-18 forwards a copy of his letter dt 28-8-18 to the Sanitary Comr. in Mysore, enclosing a copy of letter no 6261 E. 357-1897-8, from the Superintending engineer Southern Circle reporting that for reasons stated therein, there is no necessity to renew the sand of the Jewell filters at Bethmangala.

Vide Respondentiary sheet put up.

46) Renewal of sand of Jewell filters at Bethmangala was one of the immediate steps proposed to be taken in order to safeguard the Water Supply to Kolar Gold Field. The Superintending Engineer reports that the Jewell filter Expert who visited the place in February '18 was of opinion that there is a necessity for renewing the sand. This settles the matter so far as the question of renewing the sand of the filters is concerned.

H. N.

NOTE—Contn. sheet.

G. R. S. III-2

General and Revenue Secretariat. | L.B File No. 83 of 191 7.

| Serial No. | |
|---|---|
| | 47) Supplying better alum is another step proposed in this connection In para 4 of the Superintending Engineer's letter it is reported that better quality of alum is used and the results are now satisfactory. Thus both these questions are finally disposed of |
| | 48) The file connected with this Case was taken by the Confidential Section for submission to the Chief Secy. |
| | Submd 25/9/18. 49) Obtain the file please for submission to Member. |
| | MK 27.9.18. |
| 25 | From the Chief Engr. of Mysore No M. 10973 of 13-9-18. With reference to the responsible Sheet issued in accordance with the G.O. of the 5th April 1918, forwards report regarding the questions referred to the Public Works department, in the matter |
| | ~~50) Cited references are recorded to have~~ ~~29 of the Secretariat to invite the Chief~~ |

NOTE—Contn. sheet.

G. R. S. III-2]

General and Revenue Secretariat. | C.B File No. 83 of 191 .

Serial No.

of safeguarding the water supply to the Kolar Gold Field, and states that the Committee for inspecting the tank and the ~~canals~~ works has been formed and that the rules framed by the Sanitary Commissioner may be adopted.

26. From the same officer.
No B 11589 & 26-9-18

States that the question of renewing the sand on the filters at Bethamangala may be deferred for a year, and that the Superintending Engineer for the Circle has been requested to report on the working of the water supply after that period.

H. W

50) A Statement showing the steps taken in the several questions relating to K. G. F. water supply stand has been prepared and put up herewith.

5/10/18. 9.10.18. 51) Submitted for perusal. The Statement clearly indicates the proposals so far made. The rules relating to the working of the Protection Committee may be approved.

52) The other rules framed by the Commissioner

NOTE—Contn. sheet.

WD A 1789—GPB—60,000—20-3-18—S.

G. R. S. III-2]

General and Revenue Secretariat. | C.A File No. 83 of 1917.

Serial No.

for pursuing pollution of water in the river by the villages appear to be rather drastic and require careful Scrutiny This will be Examined and ~~put up~~ Submitted again for orders

2nd Member)

MC 9.10.18

167 13.10.18.

The subject may be reported with facts and details in the respective Depts. and then submitted for the 2nd Member

Recd. 28/10/18

16/10

~~After~~

53 A statement showing the stages at which the several questions relating to the K. G. F. water supply stand as ordered as personally instructed by the Asstt. Secy

3 after 118 5(1) The questions underlined in red ink may be considered as finally disposed of Others will have to be further dealt with.

NOTE—Contra. sheet.

WD A 1789—GPB—60,000—20-3-18—S.

General and Revenue Secretariat. | L.B File No. 83 of 1917.

Serial No.

Subd.

5/1/18 55) An attempt was made to separate the several subjects, ~~and~~ with a view to send them to the Secretariats Concerned for further action with the Extracts in this file. As the ~~note~~ question of the water supply to K.G. 7 was from the Quarry wall with a crude, it was found rather difficult to separate the notes in all cases ~~and to~~ under the several sub heads and send them to the ~~Secretariat~~ P.W.D. Secretariat.

H E

From the statement prepared in the office it will be seen that many of the subjects have been brought to a disposal in the case of the few that remain to be disposed of yet action as suggested in the remarks col. of the statement, will if approved be taken.

53) Yes - please submit 15 Members for perusal. 19.12.18.

Submitted with another file I put today. Required for orders on Statt. 6/1/19

57) Flag E. is submitted for perusal orders are solicited on the points mentioned in the remarks col.

1st Member) 59) Please see Statement 3/1/19

NOTE—Contn. sheet.

WD A 1789—GPB—60,000—20-3-18—S.

R. S. III-2]

General and Revenue Secretariat. | C 15 File No. 83 of 1917.

Serial No.

61) With regard to pumps and filters a draft letter is put up in accordance with the orders of the 2nd Member on the Statement

62) Regarding the Rules action is being taken separately.

Srtd.

Stg 27.2.19.

63) Issue draft & comg up.

2d. B.J.K. 1.3.19

34. To the Chief Engineer of Mysore.

No. 11234 & 4.3.19.

Requests he— to arrange for a monthly inspection of the pumps and filters by the Secy. and Supdg. Engineer.

Action has been taken on all items in accordance with the orders on the Statement.

Srtd. for ~~further orders~~, perusal.

Stg HM 8/3/19

Return the Statement & copy it entered for brig sent for the perusal of the Comm.

HM

and Statements prepared, but certain information is awaited to verify

NOTE—Contn. sheet.

G. R. S. III-2]

1380

General and Revenue Secretariat. | LB File No. 83 of 1917.

| Serial No. | |
|---|---|
| 39 | From the Chief Engineer<br>No. B. 4858 & 19.4.19.<br>With refce to 8.36<br>Requests instructions as to what the inspection of the Pumps and [illegible] of the Bellanwila water works should be made both by the Superintending Engineer and the Executive Engineer Water Supply division or by the Executive Engr. and the Sanitary Comm.<br>The whole file connected with this case has been submd. in connection with the detailed Rules to prevent the pollution of water in the Polas given by the people residing in the 21 villages constituted as a Special Santy. area in connection with the K. G. W. water supply question<br>Submd<br>[signature]<br>1/5/19.<br>Kindly Refce & suggest Members other on the statement flagged E. |
| 40 | From the Chief Engr.<br>No. 8924 & 1-5-19.<br>Submits copy of report of exam. of pumps and filters at Bellanwila & orders are required on Serials 39 & 40.<br>Submd<br>[signature]<br>7/5/19<br>Submit with main file.<br>[signature]<br>8/5 |

NOTE—Contn. sheet.

V

THE KOLAR GOLD FIELD MINING BOARD,
OORGAUM,
MYSORE STATE,
S. INDIA.

22nd January 1918.

To

The Dewan of Mysore.

Bangalore.

Sir,

KOLAR GOLD FIELD WATER SUPPLY.

Complying with the request made at the interview you so kindly granted during the recent Dasara Session to Mr. H. M. A. Cooke, Chairman of the Kolar Gold Field Mining Board, for a memo. of our requirements on the above subject, I have the honour to enclose the following papers :-

1. Report of the Chief Medical Officer, Kolar Gold Field, on the water supply of the villages and their approximate distances from the banks of the Tank and River.
2. Memos detailing the precautions adopted when introducing the water supply to Mysore City and Bangalore.
3. Results of Bacteriological Examinations of the filtered water made at our Laboratory and Public Health Institute, Bangalore

The Board would respectfully invite your attention to the following points :-

5

1 The existence of wet cultivation down to the banks of the Tank and River and in some instances actually in the bed of the Tank itself. This is a constant source of pollution by organic matter of animal and vegetable origin.

2. The close proximity of so many villages whose inhabitants use the Tank and River for water supply, even to the extent of washing soiled clothes

The recent outbreak of Cholera at Holali and the present one at Nallur (about a furlong from the Tank) emphasise the danger our water supply is exposed to at such times.

3. The fact that Bacilli Coli has been found in the filtered water drawn direct from the filters at the Works showing the presence of organic contamination, which increases in quantity at the Champion Reef Reservoirs.

4. The precautions adopted for assuring a pure supply to Mysore City and Bangalore in contrast to those which exist along the source of supply to the Kolar Gold Fields.

The following suggestions were made by our Chief Medical Officer at an interview with the Sanitary Commissioner and Deputy Commissioner on the 8th instant :

1. Wet cultivation to be prohibited to within half a mile of the banks of Tank and River.

Note- Or, as an alternative, a deep and wide trench to be dug at a safe distance from the River and Tank, which would catch the drainage from the cultivated lands, in the wet weather, and allow natural filtration, of any water that might flow in from it to River and Tank.

6

2. Certain villages to be removed.

   Note- It is difficult to name any, as nearly all up to Holali are a source of danger.

3. Villages with no water supply, or an inadequate one, to be fully supplied.

4. Coagulating Tanks to be doubled in capacity.

   Note- At present they are only able to allow about the minimum time for water of a standard turbidity of 100 to be acted on by the coagulant. The only account taken of flood times, when the water is more turbid and must in the nature of things contain more organic matter, is the addition of more Sulphate of Alumina.

5. Better supervision of filters, i.e.,cleaning and sterilising, and examination of the pipe line.

   Note- The Sulphate of Alumina used should be up to the standard laid down by the Jewell Filter Company. Our analysis of that in use lately shows it to be far short of this.

   The pipe line has been found leaking many times during the past year, notices of which were sent to our Committee Office.

6. Reservoirs at Champion Reef to be made bat and bird proof.

   Note- This has been done.

The Board earnestly trust that the suggestions made will meet with your favourable consideration, and so remove the danger, which exists, of the Field being exposed to epidemics of water borne

diseases. The fact that the filtered water showed bacilli coli in such a small quantity as 1/10 c.c. proves that the danger is a real one.

I have the honour to be,

Sir,

Your most obedient servant,

Secretary.

Copy.

Copy of the Chief Medical Officer's diary dated 7th September 1917.

Holali Visited the village with the Sanitary Commissioner. Deputy Commissioner, and other officials. There have been 21 cases of Cholera to date Four cases within the last 24 hours.

The village is close to the bund within a few yards of the tank and river bank and has only one well for Brahmins. All the other inhabitants take their drinking and other water from the tank and Pallar river, the high castes above the second weir, the Pariahs about 25 yards below it from a pool of the river.

The village was filthy, it contains about 70 houses and is Jodidar property.

Enc to dlB 83-17-1 9

Monday 5th. November 1917.

Inspected the following villages with the Medical Officer of Health

Old Bothamangalam, Jodihar Kottur, Kodihalli, Kourgenhalli, Kottur and Bothamangalam New Extension.

Old Bothamangalam. Water supply one well, south of road, but chiefly from the pipes to the north of the village belonging to the Water Works. The place was in a filthy condition and consists of a few tumble down houses on both sides of the road. No licences to build or repair will be granted the inhabitants as Government want them to move to the New Extension where the majority of the people went when the Water Works were built in 1904. This New Extension was the last place visited, but may as well be noted here. It was clean and well laid out and is supplied by pipe water from the Works. It is on the west side of the road leading from Bothamangalam to Kolar Town.

A word about the sanitation of the old village. Two sweepers are employed on Rs.5/-. One has left as the pay is not sufficient. This accounts for the dirty condition of the place.

Jodihar Kottur. A collection of a few huts on land the property of a goldsmith. Saw some potters at work. It does not concern us as regards contamination of our water supply being south of the tank. It has one well across the road to the south.

Kodihalli. This village is situated to the west of the overflow right on the bank of the tank. It was to be removed from the site in 1907 and Government voted Rs.2000 and selected a site about 1 furlong further west and built a well on the site in 1909.

The site selected is open to the same objection as the present one. It slopes gently down to the tank and would allow all the drainage from the village and cultivated lands to flow into it. The people objected to the site as being unlucky and were willing to move a couple of hundred yards from where they are. This would be folly as the idea is to get them away from the tank and keep them from using the water for all purposes drinking, personal and clothes washing. Its water supply consists of 2 wells one sunk by the villagers and one on the site selected by Government. Neither are in use, the latter has not been touched for 4 years as some cattle died after drinking the water drawn from it. All the supply is taken from the tank, though the villagers deny this yet we saw some being taken as we returned from Kottur, and the village well was full of frogs and slime and had no appearance of water being drawn from it. On the edge of the tank is a cemetery which must be partly, submerged when the tank is full.

Kourgerhalli. This is plentifully supplied with wells all sunk by the villagers, but poorly constructed, there is also a minor tank for cultivation the overflow of which runs into another tank at Kottur. The land is cultivated down to the banks of Bothamangalam Tank.

Kottur is just a little to the south and east of the last village nearer the Bothamangalam Tank. It has a few wells and a minor tank which when in flood flows into Bothamangalam Tank. The same remark re: land cultivation applies. (x)

None of the villages visited have Government wells and it seems that any person can sink a well how and where they please. Each additional well sunk in so small an area must reduce the supply in pre-existing ones and tend to make the whole lot dry up in the hot weather and make the people resort to the tank for water for all purposes.

(x) Except in Kodihalli which is not in use.

10

The system of cultivation which allows all organic matter to flow into Bethamangalam Tank is wrong in principle and would not be allowed anywhere else. All the villages are within ½ mile of Bethamangalam Tank.

We afterwards visited the Water Works and found 3 filters working. The sand was being removed from No.1 and replaced with fresh sand.

Thursday 8th. November 1917.

Inspected the following villages with the Medical Officer of Health

Hulkur. Hennalo. Vadhalli and Netto.

Hulkur. This village has 6 wells sunk by the inhabitants also 2 step wells for bathing etc. It is the usual type as seen on Monday and has cultivated land right down to the bank of the Bothenangalam Tank.

Hennalo. We were told there were 14 wells here 12 of which were brackish and not used, 2 sweet water, but one was not in use as the people immediately near it had left the village. The same remarks apply as to cultivation of land. Washing done in village tank which communicates with Bothenangalam Tank.

Vadhalli. Only one well and a tank for bathing and washing clothes etc Remarks re: cultivated lands the same.

Netto. This village is 2 furlongs or under from the river. It has 3 wells sunk by the villagers. They say they have no use for river water but this is doubtful, as in the course of conversation with the Patel we learned that when they had Cholera in 1906, they only took water from the wells and had it boiled. The inference is that at other times they had recourse to river water. Patel admitted that sometimes they go to the river for washing clothes.

From here we went down the river by boat landing at the nearest point to Hulkur on the banks of Bothenangalam Tank where wet cultivation was in full swing.

The river was sluggish, but full and quite capable of bringing infection from higher up, if contaminated by Holali or any of the other villages close to the river bank, many of which use river water for all purposes.

I did not come across a properly constructed well in any of the villages visited in the 2 days. All were shallow and most liable to contamination, having no parapet walls and surrounding earth easily washed in by the spilling of water from the vessels used to take water.

Cultivation extends in most down to the river or tank and all organic matter must find its way into either.

Wednesday 14th. November 1917.

Visited the following villages with the Medical Officer of Health:-

Timsandra, Nellur and Anktathalli.

Timsandra. This village is about a ½ furlong from the river. It has two wells for the caste people. They are shallow about 20 feet deep and are roughly revetted for about 5 feet down, there is also a parapet of ordinary slabs. The Parichs have no well and use the river water for all purposes. All the community use the river for washing clothes.

There is wet and dry cultivation to the edge of the river.

Nellur. There are 3 wells in connection with this village which is about one furlong from the river.
One Government well not used as the water smells,
One for washing vessels, and
One for drinking purposes, also a step well.

There are also 4 irrigation wells near the banks of the river where clothes are washed. The wells are in the fields with a belt of reeds between them and the river.

Wet and dry cultivation down almost to river.

Anktathalli consists of 2 portions. In one portion occupied by Vaddars, there is a good Government well built in 1909 and between the two parts a large tank about 40 yards square used for washing clothes and also for the use of the cattle. In the other parts of the village there is a 'fairly' built well but narrow.

Wet and dry cultivation down to the bed of the tank. We walked around this on dry land to the club house at Bothamangalam and found some of the outlying portions of the tank under cultivati

Thursday 6th. December 1917.

Visited the following villages with the Medical Officer of Health:-

Muddinayakanhalli, Jayamangala, Tambarhalli, Shiresandra, Shindhalli Holali. Putteri. Manajenhalli. and Chinpalli.

Muddinayakanhalli. This village is about 2 furlongs from the river and has 2 drinking water wells. Clothes are washed by the river. There is not much cultivation towards the river.

Jayamangala situated about ¼ furlong from the river. One well for caste people- water brackish. None for Pariahs who use the river as do all the inhabitants for all purposes. Very little cultivation towards the river.

Tambarhalli. About one furlong from river- no wells- river water only. Very little cultivated land towards river.

Shiresandra. About 2 furlong from river. No well but one dirty pond. Water must be taken from the river for all purposes. Some wet cultivation along bank of river.

Shindhalli. ¼ furlong from river. There are two wells- both brackish. The river water is used for drinking and washing clothes. Very little land cultivated towards river.

Holali. See visit of 7th. September. Water supply condition is unchanged.

Came back about a mile and crossed the river to Putteri situated about 1½ furlongs from the river- no wells. Tank to the east. Use the river ~~mud~~ for washing clothes. Very little land cultivated towards river.

Manajenhalli. About ½ a mile from river. There are 4 wells containing brackish water. A tank to the north-east about 20 yards x 10 to wash clothes. A draw well by the side of the same and a step well.

There are irrigation tanks and cultivated lands towards the river but at a fair distance from the latter.

Chinpalli. A few huts about 2 furlongs from river- one well- no water in it so river must be used. No cultivated lands towards river. From here we could see Kolikuper Tank which connects with the river.

List of Villages on the banks of Palar River from Holali down to Bethamangala.

| No. | Village. | Approximate Distance from River. | Remarks. |
|---|---|---|---|
| 1. | Patteri | 2 furlongs. | |
| 2. | Shinchelli | 1 " | |
| 3. | Shirasandra | 1½ " | |
| 4. | Tambarhalli | 1 " | |
| 5 | Munajenhalli | 3 " | |
| 6. | Jayamangala | 1 " | |
| 7. | Muddinayakanhalli | 4 " | |
| 8. | Chinpalli | 2 " | |
| 9. | Hatta | 2 " | |
| 10. | Timsandra | ½ " | |
| 11. | Vadhalli | 4 " | |
| 12. | Hulkur | 4 " | |
| 13. | Hangala | 1 " | |
| 14. | Hallur | ½ " | |
| 15. | Anktathalli | ½ " | |
| 16. | Kourganhalli | | Very close to Bethamangala Tank and water of tank is very liable to be contaminated. |
| 17. | Kottur. | | -do- |
| 18. | Kodihalli. | | -do- |

Ex. No. 3389-17-1

15

## Water supply to Mysore City.

| | |
|---|---|
| 1. Source of supply | Cauvery River. |
| 2. What precautions are taken as regards village contamination at the source? | Special guards have been employed throughout the whole length of the channel from the Anicut. |
| 3. List of villages near source of supply with the distance of each from same. | Belagola about 5 miles. |
| 4. Water supply of the above villages. | Water supply to the village is given and the people are not going to the river. |
| 5. Do they have recourse to the source of supply for water, for any purpose? | No. |
| 6. Were there any villages removed from the source of supply when the scheme was adopted or since? | Yes they were removed and water supply is to be given to the Jakkenkuppa Village. |

Copy.

16

Water supply to Bangalore City and Cantonment.

(1) From the Hesserghatta tank water is supplied through a covered duct to the Pumping Station at Soldevanhally and thence the same is pumped through C.I. pipe ⌀ up to Yeswanthpur where the water is filtered through Jewell Filters and supplied through pipe line to Bangalore City and Cantonment.

(2) At the source, a Tank Inspector and staff are kept to watch against contamination as per rules laid down and notices posted on boards prohibiting public resorting to the tank.

(3) There are four villages near source of supply viz: Kakol, Sonnenahalli, Kodanayakanahalli and Byatha with the distance of 2, 1, 1½ and 1 mile respectively from source.

(4) The inhabitants of the above villages do not use the water of this tank or source as they have got wells in their respective villages.

(5) The hesserghatta tank is 15 miles in circumference. Recourse by the surrounding villages to the source of supply without the knowledge of the preventing staff is possible due to the wide area of the tank and all possible precautions are taken to prevent the same.

(6) The following 8 villages were removed from the source of supply when the scheme was adopted:- (1) Voddarpalya, (2) Chickadevanpura, (3) Byatha, (4) Dassenahalli, (5) Madahalli, (6) Kakol, (7) Harohalli, and (8) Gondahalli.

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Encl to LB 53-17-1

47

## Examinations in Laboratory, Kolar Gold Field Hospital.

| 1917 | Samples taken from | Bacilli Coli. c.c. 50 | c.c. 10 | c.c. 1 | c.c. 0.1 |
|---|---|---|---|---|---|
| S-ptr. 21st. | Distribution Tank at Champion Reef | + | Not examined | | |
| " 23rd. | Laboratory Tap | + | | -do- | |
| " 29th. | Reservoir at Champion Reef No.1 | + | | -do- | |
| | Bethamangala Main at Champion Reef | + | | -do- | |
| Octr. 22nd. | -do- | + | | -do- | |
| " 20th. | Bethamangala- Delivery pipe from filter No.3 | + | Not oxd. | - | - |
| " 29th. | Bethamangala- Delivery pipe from filter No.4 | + | Not oxd. | - | - |
| Novr. 19th. | Reservoir at Champion Reef | + | + | + | - |
| " 20th. | Bethamangala Main at Champion Reef | + | + | - | - |
| " 22nd. | Bethamangala- Delivery pipe from filter No.2 | + | + | - | - |
| | -do- No.3 | + | + | - | - |
| | -do- No.4 | + | + | - | - |
| Decr. 8th. | -do- No.1 | + | + | + | - |
| " 30th. | -do- No.1 | + | + | - | - |
| | -do- No.3 | + | + | - | - |
| | -do- No. | + | + | - | - |
| 1918 Jany. 10th. | Bethamangala- Inflow to filter from coagulating tank | + | + | - | - |
| | Bethamangala- Delivery from filter | + | + | - | - |
| | Filter sand- Before washing | + | + | + | - |
| | " " - After washing. | + | + | - | - |

2 Drachms of sand washed in 80 c.c. sterile water and the water then examined as usual.

## S U M M A R Y.

50 c.cs. only examined 9 times- B.Coli present on all occasions.

50 c.cs. 1 c.c. & 0.1 c.c. examined twice- B.Coli present on all occasions in 50 c.c.

50 c.cs. 10 c.cs. 1 c.c. & 0.1 c.c.- examined thirteen times- B.Coli present on all occasions in 50 c.c.

B.Coli present on all occasions in 10 c.c.

B.Coli present on three occasions in 1

## Examinations in Public Health Institute, Bangalore.

| | | |
|---|---|---|
| Septr. 4th | Reservoir at Champion Reef- | B.Coli present in 0.1 c.c. |
| Octr. 2nd. | Bethamangala Main- | B.Coli present in 0.1 c.c. |
| | Champion Reef Reservoir- | B.Coli present in 0.1 c.c. |
| Octr. 15th. | Bethamangala Main- | B.Coli present in 0.1 c.c. |
| Novr. 23rd. | Bethamangala Main, Inflow and Government Reservoir)- | B.Coli present in 1, 3, No.2 none up to 50 c.c. |
| Decr. 8th. | No.1 Filter after repair- | B.Coli present in 5 c.c. |
| 1918 Jenry. 12th. | Filtered water from filter No.1)- | B.Coli absent in 50 c.c. |
| | -do- No.2 | - B.Coli absent in 50 c.c. |
| | -do- No.3 | - B.Coli present in 50 c.c. |
| | Water from Government Reservoir- | - B.Coli absent in 50 c.c. |
| | Water from Champion Reef Reservoir- | B.Coli present in 1 c.c. |

5.2.18

Dy Mr C.S Balasundaram Iyer To

4368 95.2.18
Jb
8317-2

G.E. Payne Esq.,

Secretary,

The Kolar Gold Field Mining Boar

Oorgaum.

Dear Sir,

I am desired to acknowledge the receipt of your letter to the address of the Dewan, dated 22nd January 1918, together with its enclosures about the measures necessary to assure a supply of pure water to the Gold Fields. The matter will receive due consideratio

2.2.18
do

Yours faithfully,

CCS

Chief Secretary.

1st b
6/ ✓ 5th

Immediate

G. R. S. VI—G/32]

SUBJECT..... Water supply to Kolar Gold Fields.

*Diary No. of letter replied to*.....

GENERAL AND REVENUE SECRETARIAT,
( )
, *the* 191 .

**Section** LB
**File No.** 83-17
**Serial No.** 3

G 1
4426-9
No. LB83-17-3
97.2.18

*Date of issue* 7 2 18

*Signed by* Mr B T Kesava Iyengar

To
The Chief Engineer in Mysore.
The Sanitary Commissioner
The Revenue Commissioner
The Deputy Commissioner, Kolar &c

Sir,

In enclosing herewith copy of a letter dt 22.1.1918 from the Secretary, Kolar Gold Field Mining Board, to the address of the Dewan of Mysore, on the measures necessary to assure a supply of pure water

*over.*

Issued with Sanitary Engineer's D.O. dated 7/2/18

No. C. 357

D 1812
Fb 83-17-34

Office of the Sanitary Commissioner
with the Government of His Highness
the Maharaja of Mysore,

Dated, Bangalore, 2 - 2 - 1918.

From

M. Srinivasa Rau Esquire., M.A., M.D., B. SC., (Edin)
D. P. H., (Cantab) & F. C. S., (London.)
*Sanitary Commissioner with the Government of His Highness the Maharaja of Mysore, Bangalore.*

To

C. S. Balasundaram Iyer Esq., B.A.,

Chief *Secretary to the Government of His Highness the Maharaja of Mysore,* ~~Department,~~
BANGALORE.

Sir,

I have the honour to state that the results of the analysis of the filtered water on the Kolar Gold Fields have, for the past some months, not been satisfactory. The Kolar Gold Fields Hospital statistics show an increase in the number of dysentery and diarrhoea cases treated, the figures for 1917 being 7606, as compared with 5688 for the preceding year and a quinquennial average of 4716. But this may not be conclusive evidence seeing that people from areas outside those supplied with Bata-mangala water, seek advice in the Civil Hospital.

2. The several samples of water examined between 4th September and 23rd November showed the presence of Bacilli Coli in 0.1 c.c. On the 8th December, however, the water taken from No.1 filter, which had under-gone repair, showed an improvement, the bacillus coli having been detected in 5 c.c instead of in 0.1 c.c. With a view to locate the source of contamination, all the leaks at the joints of the rising main were closed up, the pure water tank cleaned, the main scoured out and samples of

water

From

*The Sanitary Commissioner*
*in Mysore, Bangalore.*

To

Chief
*The Secretary to the Government*
*of H. H. the Maharaja of Mysore,*
*Department*
*Bangalore.*

Dated 2.2.18.

Despatched

Received 4 FEB

General No. G.C 3507
No.

Enclosure No. Q&V

5975

**SUBJECT.**

Submitting a report as to the measures necessary to improve the quality of the water supply on the Kolar Gold Fields.

---

Please put up Yesterday
MK

water were then examined. The results, however, continued to be just the same as before. Next, the thorough overhauling of all the filters was taken up and is either - nearing completion or has been completed.

3. I inspected the Bethamangala filters with the Medical Officer of health on the 7th January 1918. The capacity of each tank is 180,000 gallons. The tanks have baffle walls to allow of a slow passage of water. Alum at the rate of 1 grain per gallon of water is now added. According to the instructions of the Jewell filter company the alum water is to stay for only a very short time in the coagulating tank, the object being to allow the formation of enough precipitate to form the filtering medium on the filter beds. Experiments made on the spot revealed the fact that the alum water takes half an hour to pass from one end of the tank to the other, while with the proportion of alum allowed, only half the time is sufficient for the formation of the filtering medium. I am having a sample of the alum in use analysed and shall address the Chief Engineer for Irrigation as to any change that it may be desirable to effect both in regard to the quality as well as the quantity of the alum to be used.

4. The sand in the filters was almost black, not having been renewed for the last 15 or more years. A sample was, at my request, sent to the Public Health - Institute for examination. Two drams of the sample were washed in 80 c.c. sterile water and revealed lactose fermenters in 10. C.C. of 1st washing and nil in second - washing. It appears to me that the sand in the filters requires to be renewed. I have brought this to the notice of the Chief Engineer for Irrigation with a recommendation that arrangements be made for the renewal of the sand in the filters.

At

5. At the time of my inspection the whole question was discussed in detail with the Chief Medical Officer to the Mining Board, the Deputy Commissioner and the Health Officer. The Chief Medical Officer suggested the following measures for the improvement of the water supply:-

(i) the shifting of the villages of Kodihalli, Angondahalli and Nallur which are in close proximity to the Bethamangala tank,

(ii) the stoppage of all cultivation for half a mile from the river or the tank border,

(iii) the sinking of new wells in such of the villages as have no wells at present,

(iv) doubling the capacity of the cogulating tanks;

(v) better supervision of the filters; and

(vi)making the roof of the Champian Reef Reservoir bat and bird proof.

6. In regard the i and ii we have to remember that the mere storage of water for a long time results in the sedimentation of a large percentage of bacteria contained in the water; and, in the case of Betamangala tank, the water actually stands for a very long time before it is drawn upon for filtration. To this is added the bactericidal action of the sun's light and heat and the oxidising influence of the atmospheric oxygen on the water stored in the tank. There is the final assurance of safety in the Jewell filters. While therefore I agree in the desirability of sparing no effort safegaurd the tank ( including the feeders ) from pollution, I do not consider that the measures need be so drastic as the absolute removal of all villages and the prohibition of cultivation for half a mile on either bank of the river. . The proposals are roughly estimated to involve an outlay of Rs. 4, 00, 000 /- a

No. G.C. 357-4

Office of the Sanitary Commissioner
with the Government of His Highness
the Maharaja of Mysore,

Dated, Bangalore, 11 - 2 - 1918

From

M. Srinivasa Rau Esquire., M.A., M.D., B. SC., (Edin)
D. P. H., (Cantab) & F. C. S., (London.)
*Sanitary Commissioner with the Government of His Highness the Maharaja of Mysore, Bangalore.*

To

B. Ramaswamaiya, Esq., B.A., B.L.,

Ag. *Secretary to the Government of His Highness the Maharaja of Mysore,* Revenue *Department,*
BANGALORE.

Sir,

In reply to your letter No.4426-9 L.B.83-17-3 dated the 7th instant, on the subject of the measures necessary to assure a supply of pure water to the Kolar Gold Fields, I have the honor to invite reference to my letter No.G.C.357 dated the 2nd idem addressed to the Chief Secretary to the Government.

I have the honor to be,

Sir,

Your most obedient servant,

M Srinivasa Rau
Sanitary Commissioner.

19

From

The Sanitary Commissioner
in Mysore, Bangalore.

2 FEB 1918

To

The Secretary to the Government
of H. H. the Maharaja of Mysore,
Rev. Department
Bangalore.

Dated

Despatched 12th January 1918

Received

General No. G.C 357-4.
No.

Enclosure No. 7148

SUBJECT.

Inviting reference to this office No. G.C 357 dated 2nd instant on the subject of measures necessary to assure an adequate supply of pure water to the Kolar Gold Fields.

File with connected papers

MK

No. G.C.357-6

'D 1944
1B 83-17-6

Office of the Sanitary Commissioner
with the Government of His Highness
the Maharaja of Mysore,

Dated, Bangalore, 13.2. 1918

From

M. Srinivasa Rau Esquire., M.A., M.D., B. SC., (Edin)
D. P. H., (Cantab) & F. C. S., (London.)
*Sanitary Commissioner with the Government of His Highness the Maharaja of Mysore, Bangalore.*

To

B. Ramaswamaiya, Esq., B.A., B.L.,

Ag. *Secretary to the Government of H s Highness the Maharaja of Mysore,* Revenue *Department,*
BANGALORE.

Sir,

In continuation of my letter No.G.C.357-4 dated the 11th instant. I have the honor to state that from a letter received from the Deputy Commissioner. Kolar Dist., I understand that the Mining Board propose having the Ultra-Violet Ray Treatment system installed on the Kolar Gold Fields, in order to ensure the sterility of the filtered water. The system is in use in France and I believe its adoption on the Kolar Gold Fields will lead to good results. The trouble is likely to be in connection with the plant and its maintenance owing to war conditions. However, I have requested the Deputy Commissioner to let me have, in consultation with Dr. O'Donnel, a rough estimate of cost and shall address Government again on hearing from that officer.

I have the honor to be,

Sir,

Your most obedient servant,

For Sanitary Commissioner.
(absent from station)

From

*The Sanitary Commissioner*
*in Mysore, Bangalore.*

To

*The Chief Secretary to the Government*
*of H. H. the Maharaja of Mysore,*
~~Department~~
*Bangalore*

Dated 13th Feb 1918

Despatched 7393

Received 15 FEB 1918

General No. G. C. 354-6
No.

Enclosure No. _

**SUBJECT.**

Stating that it is proposed to adopt the Uebra-violet ray system treatment for ensuring the purity of the water supply on the Kolar Gold Fields.

~~File~~ Recd

22 FEB 1918

No. 2298

MYSORE P. W. DEPARTMENT,

CENTRAL OFFICE,

BANGALORE 20th February 1918.

From

THE CHIEF ENGINEER OF MYSORE,

BANGALORE.

To

B. Ramaswamaiya. Esq.. B.A.. B.L..

Secretary to Government, Revenue Department,

Bangalore.

SIR,

With reference to your letter No.4426-9/L.R.83-17-3 dated the 7th February 1918, calling for a report on the measures, if any, to be immediately adopted in order that a supply of pure water may be assured to the Kolar Gold Fields, I have the honour to inform you that on receipt, in this office, of a similar communication from the Secretary to the Kolar Gold Field Mining Board on the subject, the Sanitary Commissioner with the Government of Mysore was requested to conduct an examination of the water supplied to the Mining Companies and favour this office with his recommendations.

2. In his letter No.S.C.357 dated the 2nd February 1918 to the address of the Chief Secretary to Government (a copy of which was furnished to this office), the Sanitary Commissioner has exhaustively dealt with the situation and summed up his recommendation thus -

"Better supervision of filters - particular attention being paid to cleansing and sterilising".

3. The Superintending Engineer, Southern circle, has been accordingly requested to report the arrangements made for the removal and the renewal of the sand in the filters, so that a further examination may be made of the filtered water.

4. A further report of the action taken in the matter by the Superintending Engineer is awaited.

I have the honour to be,

S i r,

Your most obedient servant,

Chief Engineer of Mysore.

F.R.R.-2

OFFICE OF THE REVENUE COMMISSIONER
IN MYSORE.

No. C2926/17-8 *Bangalore,* 22nd February 1918.
28

FROM

D2091/L&B3-17-8

P. Raghavendra Rao, Esquire, B.A., B.L.,

*Revenue Commissioner in Mysore.*

To

*The Secretary to the Government of*
*His Highness the Maharaja of Mysore,*
Revenue *Department.*

SIR,

With reference to your letter No. 4426-9/L.B.3-17-8 dated the 7th instant, calling for a report on the measures necessary to assure a supply of pure drinking water to the Kolar Gold Fields, I have the honor to state that, of the six suggestions of the Chief Medical Officer, Kolar Gold Filed Mining Borad, only the 1st two viz., (i) the prohibition of wet cultivation to within hali a mile of the banks of the tank and river and (ii) the removal of certain villages, relate to the Revenue Department. The Deputy Commissioner of Kolar who was consulted in the matter is of opinion that these proposals will be very costly, that they will cause great hardship to the people in the area affected and that they may be considered after his suggestion about the Ultra Violet Ray treatment is investigated - vide copy of the Deputy Commissioner's demi official No.246 dated the 11th instant and its enclosures, forwarded herewith.

2. I quite agree with the Deputy Commissioner in his view that restriction of wet cultivation and wholesale removal of villages are drastic measures entailing not only great hardship to the villagers of the locality but also uncalled for and heavy expenditure to Government. Of course, these are measures which the Mining Board would, from their point of view naturally, urge upon

the Durbar, but they are measures which cannot be adopted and rushed. Less drastic and less expensive measures have to be thought of. As regard the Ultra Violet Ray treatment, I fear it may not be within the range of practical politics as matters stand at present. But, in case the Chief Electrical Engineer can get out the necessary plant and instal it and the Public Health Department are satisfied also with its working, there is no doubt, however, that this is the remedy indicated. Meantime, certain precautions have been taken by both the Public Works and the Public Health Departments and it may be hoped that some success will attend the attempts made.

3. If the Government so wish it, I shall call a meeting of the Chief Engineer, Public Works Department, the Sanitary Commissioner and the Deputy Commissioner, Kolar District, discuss the situation with them and submit my report of the result.

I have the honor to be,

Sir,

Your most obedient servant

P Raghavendra Rao
26.2.03

Revenue Commissioner.

T.B.M.

En 1423 83-

D.O.No.246 dated 11th February 1918 from the Deputy Commissioner, Kolar District, to the Revenue Commissioner in Mysore, Bangalore.

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With reference to your letter No.C.2926/G1. dated 9th February 1918 asking for the submission of my opinion, by the 20th instant, on the first two suggestions mentioned in the letter of the Secretary to the Kolar Gold Field Mining Board, I enclose herein copies of the following papers:-

1. A note on the subject prepared by me.
2. D.O. letter No.13 dated 1st February 1918 from the Executive Engineer, Water-supply Division, Bangalore.
3. Reply from Dr.Srinivasa Rao to my note No.C.665-11 dated 4th February 1918.
4. My reply to Dr.Srinivasa Rao (No.C.241 dated 9th February 1918).
5. My D.O. letter No.C.242 dated 9th February 1918 to the Chief Electrical Engineer, Government of Mysore, Bangalore.
6. My D.O. letter No.C.244 dated 9th February 1918 to Dr.David, District Sanitary Officer, Kolar.

II. It appears to me that the prohibitions of wet cultivation and the removal of villages may be considered after the possibility of the Ultra Violet Ray treatment is examined.

---

'C o p y'

For Revenue Commissioner.

H.V.

Encl to 21,33-17 *

N O T E.

( Kolar Gold Filed Water Supply )

The question of the purity of the water supply for the Kolar Gold Field was considered at the Officers' Meeting and at the Taluk Conference on the 20th January 1918. The Amildar thinks that the cost of prohibiting wet cultivation within half a mile of the banks of Tank and river and the cost of acquiring certain villages which are to be removed may come to about 5 lakhs. The shifting of population from one area to another is a measure involving considerable hardship and in the Taluk Conference when the matter was informally discussed, the people were loud in their complaints and said that for the Gold Mining Industry which may last about 30 or 40 years more, it was very hard that villages existing from time immemorial on the Palar should be removed.

2. The Executive Engineer says that it is possible to construct a tank at Thimmaraya Voddu between Holali and Bethamangala and if this tank is constructed it appears to be unnecessary to prohibit any wet cultivation on the upper side of the Thimmaraya Voddu. For this Thimmaraya Voddu tank to be feasible, the Jodidars of Holali have to pay a considerable contribution and it is doubtful whether the Jodidars will come forward with so much contribution. If the Thimmaraya Voddu tank is constructed it may be possible to find wet lands in exchange for the wet lands on which wet cultivation is to be prohibited, but it is believed from the enquiry so far made, that the area commanded by Thimmaraya Voddu will be an area entirely occupied already by the Jodidars of Holali and others. If the project of having an irrigational system on the Vrishabapathi matures, it may be possible to find wet lands in exchange for the wet lands to be acquired to render the catchment area of the Bethamangala tank secure. But the population of the villages in the catchment area of the Bethamangala tank appear to be unwilling to move.

3. The excess water that will be available in the Bethamangala tank by prohibiting wet cultivation on the banks of the Palar

will perhaps be available to give house connections to Robertsonpet and water supply to Oorgaum village. In that case water tax can be levied in Robertsonpet town.

4. The District Medical Officer of Kolar has promised to inspect the villages on the Palar river with regard to Dr.O'Donnell notes, and the proposals of the District Medical Officer as to the number of wells that are required in each village etc are awaited.

5. With regard to the doubling in capacity of coagulating tanks, Dr.Sreenivasa Rao has the matter under consideration and I have asked the Executive Engineer, Water Supply Division to let me have a copy of the note prepared by the Jewell Filter Company regarding the installation of their filter.

6. With regard to the better supervision, i.e., clearing and sterilising and examination of the pipe lines, it will perhaps be better if the fitter employed by the water works Department is placed under the control of the Sanitary Board. The Medical Officer of Health will be able to supervise and see that when leaks are attended to, necessary precautions are taken.

7. As regards sulphate of Alumina, the water works Department can see that they can purchase the best material available, and if the Mining Companies agree, Mr.Kendall can make periodical examination of the sulphate of alumina used. If there is a Government Officer that can analyse this sulphate of alumina he can also do it periodically.

8. I am not sure whether raw water in Bethamangala tank has also been examined bacteriologically side by side with water taken from the filters. If such an examination has been made I wish to know whether raw water in Rethamangala tank is really less pure with regard to Bacilli Coli than the water from the filters

9. In the January issue of the Local Self Government Gazette, on page 8, the following passage occurs:-

" In 1878, it was discovered that the shorter wave lengths of

light were the most effective rays in spectrum in destroying bacteria. Our knowledge of Ultra violet lights is derived from the research work done by the French Scientists. The quartz tube lamp is now the recognised ultra violet ray sterilizer. These lamps are inserted into cast iron mains, and every drop of water is made to pass through the intense fields of light several times by a system of baffles which the water encounters in its passage through the pipes. Before adopting this method, the water must be freed from turbidity and colour, otherwise the results are not satisfactory, and so it should be used only after the water has passed through sand or mechanical filters. Five lamps for each million gallons of water to be sterilized per day is the allowance, but this covers a large factor of safety, and the number may be reduced without affecting the efficiency. Consumption of current is about 30 kilo watts per million gallons of water treated.

The efficiency of the ultra violet ray treatment is very high. In polluted water containing 35000 B Coll organisms per c.c. there were none after treatment with ultra violet ray sterilizer. Light treatment eliminates all after growths in the pipes. Although its expense may operate against the general adoption of this method, still we think it is worthy of consideration by a Municipal City which either generates its electric current or can purchase it very cheap. There are many successful installations of these sterilizers in France and the United States"

10. Seeing that we have a supply of electric current in the Kolar Gold Field, and seeing also that the efficiency of the ultra violet ray treatment is very high and in consideration of the fact that the quartz tube lamps are to be used in cast iron mains after the water is passed through sand or mechanical filters, it appears to be a question whether we should not once for all go in for the ultra violet ray treatment and thereby avoid the inconvenience of having to remove populations of some villages wholesale. The cost of acquisition of lands and removal of villages will not be small. It may come to some lakhs. It may be that the ultra violet ray treatment will not be more costly than the acquisition of lands and the removal of villages. The cost of the ultra violet ray treatment may perhaps be met by increasing the

cost of the water supplied to the Mines, and the present rate which is for filtered water according to the agreement with Messrs. John Taylor and Sons can probably be raised by agreement, when the water is not only filtered but is also purified by the ultra violet ray treatrent.

---

" C O P Y "

For Revenue Commissioner.

T.B.K.

Enclosure No. 6

D.O. letter No.13 dated 1st February 1918 from the Executive Engineer Water Supply Division, to the Deputy Commissioner, Kolar.

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Your D.O. No.196 dated 25th ultimo.

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In October last a complaint was received from the Mining Board that the pipe line from Bethmangala to Champion Reefs was leaking in many places allowing soil contamination. The Superintendent, Bethmangala and the Assistant Engineer attached to this office inspected the whole line and found no such defect as that pointed out. It was then considered that owing to the existence of open space below the roofing of the reservoirs at the Chamion Reefs, bats and sparrows might have got in and caused contamination. These sites have now been got closed up. The question of the necessity of renewing the sand in the filters was also taken up with the Jewel Filter Export Company. The firm say that it is not generally necessary to renew the sand. The expert from the firm is expected to arrive here shortly and will be taken to the filters and his opinion taken. Meanwhile, the filters are being overhauled and I expect all of them will be cleaned thoroughly in the course of the next few days.

2. I shall send you a copy of the Memorandum you refer to shortly. I may state now, that the filter plant at Bethmangala was installed only in consultation with the Jewell Filter Export Co., and that, I think, the size of the coagulating tank is enough for the quantity of water filtered.

---

' C o p y '

For Revenue Commissioner.

H.V.

Ene to 1583-17-8

Copy of D.O.No.C.665-11 dated 4th February 1918 from the Sanitary Commissioner to Government of Mysore to the Deputy Commissioner Kolar

---

I thank you for your note on the K.G.F. water supply. We have no copy of the note on the filter system prepared by the Jewell Filter & Co.. Possibly, the water supply division of the P.W.D. may possess a copy.

I agree with you in the matter of shifting the villages. It is very costly and not necessary. I think that more wells should be sunk in the villages in which water supply is scanty and thus discourage the people from resorting to the river. I am not in favour of doubling the capacity of the coagulating tanks. The alum used is being analysed in the Public Health Institute and the use of alum will be regulated by the D.P.W. The sand in the filters needs renewal and I have addressed the D.P.W. on the subject.

The Bethmangala tank water is also being analysed along with filtered water. The latter is of course better than the tank water from the point of view of colli bacilli.

The filters require better supervision and more frequent cleaning and sterilizing. The P.W.D. will, I am sure, attend to this.

I have made arrangements for more frequent examination of the K.G.F. water.

I have heard of the use of ultra violet ray treatment of water but under the present war conditions, the installation of this plant is out of question. We have to wait till the war ceases for the adoption of this system.

---

'C o p y'

For Revenue Commissioner.

H.V.

Encl 3 to 3-17-8 7-

D.O. letter No.C.241 dated 9th February 1918 from the Deputy Commissioner, Kolar District, to the Sanitary Commissioner, Government of Mysore, Bangalore.

---

I thank you for your D.O. of the 4th February 1918 regarding the purity of the water supply to Kolar Gold Field. I had a conversation with Dr.O'Donnell on the evening of the 7th instant. It appears that the Ultra Violet Ray treatment is in use in Marseilles and it does not appear to be a costly affair after all. Neither does it appear that we should wait for the conclusion of the war to instal this system. It appears the only draw back of this Ultra Violet Ray treatment is that occasionally the lamps may be burnt out and renewals may be required; but I am sure this difficulty will not be a serious one on the Gold Field where there is electric staff, both of the Government of Mysore and of the Mines. I think we may ask the Chief Electrical Engineer to the Government of Mysore for an estimate for the installation of the Ultra Violet Ray treatment system and then discuss the question. I have received a letter from the Revenue Secretary under date, 7th February 1918, asking me to send a report before 1st March 1918 on the water supply question indicating the measures, if any, to be immediately adopted, their probable cost and how the cost is to be met. I presume you have also received a letter to a similar effect.

2. As regards the questions, what "filtered water" means and whether for water treated by Ultra Violet Ray treatment an extra rate can be levied, the Mining Board are likely to entertain a different opinion. In their opinion, filtered water appears to mean pure water and they seem to think that the Government should bear the cost of the Ultra Violet Ray treatment.

---

'C o p y'

For Revenue Commissioner.

H.V.

Wtol B83 17-8

D.O.letter No.C.242 dated 9th February 1918 from the Deputy Commissioner Kolar District, to the Chief Electrical Engineer, Government of Mysore, Bangalore.

----------:o:---------

The water supplied from Bethamangala Tank after filteration to the Mines for drinking purposes does not appear to be as free from Bacilli Coli as it ought to be and there is a proposal that immediately steps should be taken to purify the water.

2. It is believed that the ultra violet ray treatment will be the best one to adopt under the circumstances of the Kolar Gold Field. It is thought that the expense will not be very considerable and that the installation can be put up even during war time.

3. The following extract from the January issue of the Local Self Government Gazette on page 8 may be of use:- " In 1878 it was discovered that the shorter wave lengths of light were the most effective rays in spectrum in destroying bacteria. Our knowledge of ultra violet lights is derived from the research work done by the French scientists. The quartz tube lamp is now the recognised ultra violet ray sterilizer. These lamps are inserted into cast iron mains, and every drop of water is made to pass through the intense fields of light several times by a system of baffles which the water encounters in its passage through the pipes. Before adopting this method, the water must be freed from turbidity and colour, otherwise the results are not satisfactory, and so it should be used only after the water has passed through sand or mechanical filters. Five lamps for each million gallons of water to be sterilized per day is the allowance, but this covers a larger factor of safety, and the number may be reduced without affecting the efficiency. Consumption of current is about 30 killo watts per million gallons of water treated.

The efficiency of the ultra violet ray treatment is very high. In polluted water containing 35000 B Coli organisms per c.c. there were none after treatment with ultra violet ray sterilizer. Light treatment eliminates all after growths in the pipes. Although its expense may

operate against the general adoption of this method, still we think it is worthy of consideration by a Municipal City which either generates its electric current or can purchase it very cheap. There are many successful installations of these sterilizers in France and the United States"

4. I am told that the Ultra Violet Ray treatment is in use in Marseilles and I dare say you have personal knowledge as to how the system works.

5. I shall feel myself obliged if you can give me a very early reply on the subject, as the Government wants a reply from me before the 1st March 1918.

---

" C O P Y "

For Revenue Commissioner.

T.B.M.

Encl. to B 83-17-8

D.O. letter No.C.244 dated 9th February 1918 from the Deputy Commissioner Kolar District to Dr.David, District Sanitary Officer, Kolar.

---

Thanks for your letter stating that you would inspect the villages on the Palar river and send me a note shortly. The Secretary to Government, Revenue Department, has written to me under date, 7th February 1918, asking me to thoroughly examine the question of the purity of the water supply of Kolar Gold Field and submit a report on the points raised in the letter of the Secretary to the Mining Board, indicating the measures, if any, to be immediately adopted, their probable cost and how the cost is to be met I am asked to regard the matter as very urgent and send a reply before 1st March 1918. The Sanitary Commissioner, in a D.O. of the 4th February 1918 states that he thinks that more wells should be sunk in the villages in which water supply is scanty and thus discourage the people from resorting to the river. I think you will have to make a report about these wells that may be required in the villages on the Palar. If you can send me the report early, I shall be able to ask for some allotment of money for the wells in my report which has to go before 1st March 1918 according to the letter from the Secretary to Government.

---

'C o p y'

For Revenue Commissioner.

H.V.

D 2092

L.B.83-17-9

No. Ref A.C.580

17-18

Deputy Commissioner's Office,

Kolar District,

Dated Kolar, the 26th February 1918.

28

From

B. Venkoba Rao, Esq.,B.A.,

Deputy Commissioner,

Kolar District.

To

B. Ramaswamaiya, Esq.,B.A.,B.L.,

Secretary to the Government of His Highness

the Maharaja of Mysore, Revenue

Department, Bangalore.

Sir,

With reference to your letter No.4426-9 L.B.83-17-3 dated 7th February 1918 regarding the purification of the water supply of the Kolar Gold Field, I have the honour to enclose herein copies of the following papers:--

1.A note on the subject prepared by me.

2.D.O.letter No.13 dated 1st February 1918 from the Executive Engineer,Water Supply Division, Bangalore.

3.Reply from Dr. Sreenivasa Rao to my note(No.C.665-11 dated 4th February 1918)

4.My reply to Dr. Sreenivasa Rao(No.C.241 dated 9th February 1918.)

5.My D.O.letter No.C.242 dated 9th February 1918 to the Chief Electrical Engineer,Government of Mysore,Bangalore.

6.My D.O.letter No.C.244 dated 9th February 1918 to Dr.David,District Sanitary Officer,Kolar.

7.Reply from the Executive Engineer,Water Supply Division,to my note (No.16 dated 11th February 1918)

8.My reply to the above D.O. of the Executive Engineer, Water Supply Division(No.C.262 dated 15-2-18).

9.D.O.G.C.357-5 dated 13th February 1918 from Dr. Sreenivasa Rao.

10.My reply to the above(No.C.258 dated 15th February 1918.)

11.D.O.No.C.259 dated 15th February 1918 to Dr.J.D. O'Donnell

12.Dr.O'Donnell's reply dated 19-2-18 to the above.

13.D.O.No.60 dated 18/22 th February 1918 from the Chief Electrical Engineer,Government of Mysore, Bangalore.

14.My reply to the above(D.O.No.137 dated 26-2-18).

15.Letter to Dr.O'Donnell(No.136 dated 26-2-18).

16.My D.O.No.138 dated 26th February 1918 to Dr.Sreenivasa Rao.

2. The Ultra Violet Ray treatment of water appears to be very promising. According to Mr. Forbes. it would cost us about Rs.7-8-0 per million gallons and the capital costs for the necessary equipment would not be more than Rs.25000/-. It is desirable, if possible, to electrify the Pumping Plant at Bethamangala in connection with this Ultra Violet Ray treatment of water, as fuel that is now being used in large quantities in Bethmangala for the working of the pumps. will be released for supply to the people. and the price of fuel will be reduced. If the electrification of the pumping plant at Bethmangala cannot, for any reason, be taken up at once, the Ultra Violet Ray treatment can be adopted independently at once, as it is possible to apply the lamps on the north and south mains leaving the Reservoirs at Champion Reef. An advantage,in this independent scheme, would be, as Dr.O'Donnell points out in his letter of the.19th February 1918, that the sterilized water would go -- direct into the pipes on the Mining Area.

3. Mr. Forbes, Chief Electrical Engineer, Government of Mysore wants complete Bacteriological data in his last letter and I have asked Drs. O'Donnell and Srinivasa Rao for the particulars. Further action will have to be taken by the Chief -- Electrical Engineer after he gets Bacteriological data.

4. With regard to the acquisition of lands and the removal of villages, it may perhaps be unnecessary to take any action if the Ultra Violet Ray Apparatus is installed. I am, however, making necessary enquiries as to how to prevent the pollution of water in the river.

I have the honour to be,

Sir,

Your most obedient servant,

Deputy Commissioner,

Kolar District.

M.K.

Enc to ox B83-17-9

Note.

(Kolar Gold Field Water Supply).

The question of the purity of the water supply for the Kolar Gold Field was considered at the Officers' Meeting and at the Taluk Conference on the 20th January 1918. The Amildar thinks that the cost of prohibiting wet cultivation within half a mile of the banks of tank and river and the cost of acquiring certain villages which are to be removed may come to about 5 lakhs. The shifting of population from one area to another is a measure involving considerable hardship and in the Taluk Conference when the matter was informally discussed, the people were loud in their complaints and said that for the Gold Mining Industry which may last about 30 or 40 years more, it was very hard that village existing from time immemorial on the Palar should be removed.

2. The Executive Engineer says that it is possible to construct a tank at Thimmaraya Voddu between Holali and Bethmangala and if this tank is constructed it appears to be unnecessary to prohibit any wet cultivation on the upper side of the Thimmaraya Voddu. For this Thimmaraya Voddu tank to be feasible, the Jodidars of Holali have to pay a considerable contribution and it is doubtful whether the Jodidars will come forward with so much contribution. If the Thimmaraya Voddu tank is constructed it may be possible to find wet lands in exchange for the wet lands on which wet cultivation is to be prohibited, but it is believed from the enquiry so far made, that the area commanded by Thimmaraya Voddu will be an area entirely occupied already by the Jodidars of Holali and others. If the project of having an irrigational system on the Vrishabavathi matures, it may be possible to find wet lands in exchange for the wet lands to be acquired to render the catchment area of the Bethmangala tank secure. But the population of the villages in the catchment

area of the Bethmangala tank appear to be unwilling to move.

3. The excess water that will be available in the Bethmangala tank by prohibiting wet cultivation on the banks of the Palar will perhaps be available to give house connections to Robertsonpet and water supply to Oorgaum village. In that case water tax can be levied in Robertsonpet Town.

4. The District Medical Officer of Kolar has promised to inspect the villages on the Palar river with regard to Dr. O'Donnell's notes, and the proposals of the District Medical Officer as to the number of wells that are required in each village etc are awaited.

5. With regard to the doubling in capacity of coagulating tanks, Dr. Sreenivasa Rao has the matter under consideration and I have asked the Executive Engineer, Water Supply Division to let me have a copy of the note prepared by the Jewell Filter Company regarding the installation of their filter.

6. With regard to the better supervision, i.e., cleaning and sterilising and examination of the pipe lines, it will perhaps be better if the fitter employed by the Water Works Department is placed under the control of the Sanitary Board. The Medical Officer of Health will be able to supervise and see that when leaks are attended to, necessary precautions are taken.

7. As regards sulphate of Alumina, the Water Works Department can see that they purchase the best material available, and if the Mining Companies agree, Dr. Kendall can make periodical examination of the sulphate of alumina used. If there is a Government Officer that can analyse this sulphate

of alumina he can also do it periodically.

8. I am not sure whether raw water in Bethmangala tank has also been examined bacteriologically side by side with water taken from the filters. If such an examination &a has been made I wish to know whether raw water in Bethmangala tank is really less pure with regard to Bacilli Coli than the water from the filters.

9. In the January issue of the Local Self Government Gazette,on page 8; the following passage occurs:-- "In 1878, it was discovered that the shorter wave lengths of light were the most effective rays in spectrum in destroying Bacteria. Our knowledge of Ultra Violet lights is derived from the research work done by the French Scientists. The quartz tube lamp is now the recognised Ultra Violet ray sterilizer. These lamps are inserted into cast iron mains, and every drop of water is made to pass through the intense fields of light several times by a system of baffles which the water encounters in its passage through the pipes. .Before adopting this method, the water must be freed from turbidity and colour,otherwise the results are not satisfactory, and so it should be used only after the water has passed through sand or mechanical filters. Five lamps for each millions gallons of water to be sterilized per day is the allowance, but this covers a large factor of safety, and the number may be reduced without affecting the efficiency. Consumption of current is about 30 kilo watts per million gallons of water treated.

The efficiency of the ultra violet ray treatment is very high. In polluted water containing 35000 B Coli organisms per c.c. there were none after treatment with ultra violet ray sterilizer. Light .treatment eliminates all after

growths in the pipes. Although its expense may operate against the general adoption of this method, still we think it is worthy of consideration by a Municipal City which either generates its electric current or can purchase it very cheap. There are many successful installations of these sterilizers in France and the United States".

10. Seeing that we have a supply of electric current in the Kolar Gold Field, and seeing also that the efficiency of the ultra violet ray treatment is very high and in consideration of the fact that the quartz tube lamps are to be used in cast iron mains after the water is passed through sand or mechanical filters, it appears to be a question whether we should not once for all go in for the ultra violet ray treatment and thereby avoid the inconvenience of having to remove populations of some villages wholesale. The cost of acquisition of lands and removal of villages will not be small. It may come to some lakhs. It may be that the ultra violet ray treatment will not be more costly than the acquisition of lands and the removal of villages. The cost of the ultra violet ray treatment may perhaps be met by increasing the cost of the water supplied to the Mines, and the present rate which is for <u>filtered</u> water according to the agreement with Messrs. John Taylor & Sons can probably be raised by agreement, when the water is not only filtered but is also purified by the ultra violet ray treatment.

31-1-18.

(COPY)

Deputy Commissioner,

Kolar District.

Enc to dl 3383-12-9

D.O.No.13 dated 1st February 1918 from the Executive Engineer, Water Supply Division, Bangalore, to the Deputy Commissioner, Kolar District.

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Your D.O.No.196 dated 25th ultimo.

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In October last a complaint was received from the Mining Board that the pipe line from Bethamangala to Champion Reefs was leaking in many places allowing soil contamination. The Superintendent, Bethamangala and the Assistant Engineer attached to this Office inspected the whole line and found no such defect as that pointed out. It was then considered that owing to the existence of open space below the roofing of the reservoirs at the Champion Reefs, bats and sparrows might have got in and caused contamination. These sides have now been got closed up The question of the necessity of renewing the sand in the filters was also taken up with the Jewell Filter Export Company. The firm say that it is not generally necessary to renew the sand. The expert from the firm is expected to arrive here shortly and will be taken to the filters and his opinion taken. Meanwhile, the filters are being overhauled and I expect all of them will be cleaned thoroughly in the course of the next few days.

2. I shall send you a copy of the Memorandum you refer to shortly. I may state now, that the filter plant at Bethamangala was installed only in consultation with the Jewell Filter Export Co., and that I think the size of the coagulating tank is enough for the quantity of water filtered.

"Copy"

Deputy Commissioner,

Kolar District.

85

Enclosure to CB 88-12-9

D.O. letter No.C.665-11 dated 4th February 1918 from Dr. Sreenivasa Rao, Sanitary Commissioner, Government of Mysore, to the Deputy Commissioner, Kolar District.

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I thank you for your note on the Kolar Gold Field water supply. We have no copy of the note on the filter system prepared by the Jewell Filter Co., Possibly, the water supply division of the P. W. D. may possess a copy.

I agree with you in the matter of shifting ~~of~~ the villages. It is very costly and not necessary. I think that more wells should be sunk in the villages in which water supply is scanty and thus discourage the people from resorting to the river. I am not in favour of doubling the capacity of the co-agulating tanks. The Alum used is being analysed in the Public Health Institute and the use of alum will be regulated by the D.P.W.. The sand in the filters needs renewal and I have addressed the D.P.W. on the subject.

The Bethmangala Tank water is also being analysed along with filtered water. The latter is of course better than the tank water from the point of view of Colour Bacilli.

The filters require better supervision and more frequent changing and sterilizing. The P.W.D will, I am sure, attend to this.

I have made arrangements for more frequent examination of the Kolar Gold Field water.

I have heard of the use of Ultra Violet Ray treatment of water but under the present war conditions, the installation of this plant is out of question. We have to wait till the war ceases for the adoption of this system.

"COPY"

B. Venkoba Rao

Deputy Commissioner,
Kolar District.

85

ref to LB 8317-9

D.O.No.C.241 dated 9th February 1918 from the Deputy Commissioner, Kola-r District, to Dr. Sreenivasa Rao, Sanitary Commissioner, Government of Mysore, Bangalore.

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I thank you for your D.O. of the 4th February 1918 regarding the purity of the water supply to Kolar Gold Field. I had a conversation with Dr.O'Donnell on the evening of the 7th instant. It appears that the Ultra Violet Ray treatment is in use in Marseilles and it does not appear to be a costly affair after all. Neither does it appear that we should wait for the conclusion of the war to instal this system. It appears the only draw-back of this Ultra Violet Ray treatment is that occasionally the lamps may be burnt out and renewals may be required; but I am sure this difficulty will not be a serious one on the Gold Field, where there is electric staff both of the Government of Mysore and of the Mines. I think we may ask the Chief Electrical Engineer to the Government of Mysore for an estimate for the installation of the Ultra Violet Ray treatment system and then discuss the question. I have received a letter from the Revenue Secretary under date, 7th February 1918, asking me to send a report before 1st March 1918 on the water supply question indicating the measures, if any, to be immediately adopted, their probable cost and how the cost is to be met. I presume you have also received a letter to a similar effect.

2. As regards the questions, what "filtered water" means and whether for water treated by Ultra Violet Ray treatment an extra rate can be levied, the Mining Board are likely to entertain a different opinion. In their opinion, filtered water appears to mean pure water and they seem to think that the -- Government should bar the cost of the Ultra Violet ray treatment

"COPY"

B. Venkoba Rao

Deputy Commissioner,
Kolar District.

85

Misc xB83-179

D.O.No.C.242 dated 9th February 1938 from the Deputy Commissioner, Kolar District, to the Chief Electrical Engineer, Government of Mysore.

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The water supplied from Bethmangala tank after filtration to the Mines for drinking purposes does not appear to be as free from Bacilli Coli as it ought to be and there is a proposal that immediately steps should be taken to purify the water.

2. It is believed that the Ultra Violet Ray Treatment will be the best one to adopt under the circumstances of the Kolar Gold Field. It is thought that the expense will not be very considerable and that the installation can be put up even during war time.

3. The following extract from the January issue of the Local Self Government Gazette on page 8 may be of use:--

"In 1878 it was discovered that the shorter wave lengths of light were the most effective rays in spectrum in destroying bacteria. Our knowledge of ultra violet lights is derived from the research work done by the French Scientists. The quartz tube lamp is now the recognised ultra violet ray sterilizer. These lamps are inserted into cast iron mains, and every drop of water is made to pass through the intense fields of light several times by a system of baffles which the water encounters in its passage through the pipes. Before adopting this method, the water must be freed from turbidity and colour, otherwise, the results are not satisfactory, and so it should be used only after the water has passed through sand or mechanical filters. Five lamps for each million gallons of water to be sterilized per day is the allowance, but this covers a large factor of -- safety, and the number may be reduced without affecting the -- efficiency. Consumption of current is about 30 killo watts

per million gallons of.water treated.

The efficiency of the ultra violet ray treatment is very high. In polluted water containing 35000 B Coll organisms per c.c. there were none after treatment with ultra violet ray sterilizer. Light treatment eliminates all after growths in the pipes. Although its expense may operate against the general adoption of this method, still we think it is worthy of consideration by a Municipal City which either generates its electric current or can purchase it very cheap. There are many successful installations of these sterilizers in France and the United States"

4. I am told that the Ultra Violet Ray treatment is in use in Marseilles and I dare say you have personal knowledge as to how the system works.

5. I shall feel myself obliged if you can give me a very early reply on the subject, as the Government wants a reply from me before the 1st March 1918.

"Copy"

Deputy Commissioner

Kolar District.

Enc to LB 8317-9

D.O.No.C.244 dated 9th February 1918 from the Deputy Sanitary Commissioner, Kolar District, to the District ~~Medical~~ Officer, Kolar.

---

Thanks for your letter stating that you would inspect the villages on the Palar river and send me a note shortly. The Secretary to Government, Revenue Department has written to me under date, 7th February 1918, asking me to thoroughly examine the question of the purity of the water supply of Kolar Gold Field and submit a report on the points raised in the letter of the Secretary to the Mining Board, indicating the measures, if any, to be immediately adopted, their probable cost and how the cost is to be met. I am asked to regard the matter as very urgent and to send a reply before 1st March 1918. The Sanitary Commissioner, in a D.O. of the 4th February 1918, states that he thinks that more wells should be sunk in the villages in which water supply is scanty and thus discourage the people from resorting to the river. I think you will have to make a report about these wells that may be required in the villages on the Palar. If you can send me the report early, I shall be able to ask for some allotment of money for the wells in my report which has to go before 1st March 1918 according to the letter from the Secretary to Government.

"Copy"

Deputy Commissioner,

Kolar District.

Ex to 1383-17-9

D.O.No.16 dated 11th February 1918 from the Executive Engineer, Water Supply Division, Bangalore, to the Deputy Commissioner, Kolar District.

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Your D.O.No.110 of the 2nd instant with its enclosure.

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In the agreement with the Jewell Filter Company entered into at the time of installation of the Bangalore Jewell Filters, it is stated that the co-agulating tanks should be capable of holding 5,00,000 gallons while the capacity of the filters was provided to be 3 millions. The capacity of the Bethamangala filters is nearly 1,500,000 gallons and it will be enough if the coagulating tank holds one sixth of this or 25,0000 gallons. The actual capacity of the basin is 350000 gallons. I have not been able to get hold of the memorandum you require. I am searching for it and shall send you a copy as soon as I get it.

You suggest in your note that it will be better if the fitter employed by this Department is placed under the [illegible] Sanitary Board for proper supervision of the cleaning of the pipes etc. I do not see any improvement will result by the proposed arrangement but if the Board are willing to try the experimemt, I, personally, will not raise any objection.

As regards Alumina, the best quality available is always purchased. If the Mining Board can assist in getting better Alumina, I shall certainly be glad to recommend the purchase of the quality that could be secured by them. I do not

see the necessity for ~~&~~ frequent test of alumina as it will be desirable to purchase the quantity required for one year at a time and it will be enough if tests are made at the time of purchase.

I have requested the Sanitary Commissioner to examine the raw water of Bethamangala and have not received the result of analysis.

Regarding the ultra violet ray treatment, I am studying the subject and am not now in a position to say anything about it.

"Copy"

Deputy Commissioner,

Kolar District.

Ltr to LB8317-9

D.O.No.C.262 dated 15th February 1918 from ~~the Executive E~~ the Deputy Commissioner, Kolar District, to the Executive Engineer, Water Supply Division, Bangalore.

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Thanks for your D.O. of 11th February 1918. I am glad that you are studying the question of the Ultra Violet Ray treatment of water It appears to be a very promising subject. About 5 quartz tube lamps worth about 50£ each seem to be required and the consumption of current seems to be not large although a high voltage will be required. The system of the Ultra Violet Ray Treatment appears to have been found successful in Marseilles. Probably some renewals of lamps will be required but I dare say that would present no insuperable difficulties. Probably the electrification of the pumping plants at Bethmangala would be required but such an electrification has been long overdue. The quantity of fuel consumed at Bethmangala is something appalling and it has raised the price of fuel allround perhaps beyond the point of bearing for the people. I believe there is Dr. Gibson in Madras who knows about this Ultra Violet Ray treatment. If Dr. O'Donnell of the Kolar Gold Field furnishes me any more particulars about the Ultra Violet Ray treatment, I shall let you know. Meanwhile I have written to the Chief Electrical Engineer to the Government of Mysore asking him to study the subject and let me know his views. On the whole, I am of opinion that the Ultra Violet ray treatment is the best thing in the circumstances of the Gold Field and that we may make all efforts to make it an accomplished fact as it will be something up-to-date in a country like ours where large electric plants are in operation.

Hoping to hear more from you after you study the subject.

"Copy"

Deputy Commissioner

Kolar District.

88

Enclosure B83 Dy

D.O.No.G.C.357-5 dated 13th February 1918 from Dr. Sreenivasa Rao, Sanitary Commissioner, Government of Mysore, to the Deputy Commissioner, Kolar District.

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Your D.O.No. C.241 dated the 9th instant. I am aware that the Ultra Violet Ray treatment is very effective and have heard o its adoption in France. I regret I have no means of estimating the probable cost of having an installation on the Kolar Gold Fields and if Dr.O'Donnell would kindly arrange to obtain an estimate for us, I shall be glad to submit it to Government for sanction.

I am also writing to the Chief Electrical Engineer but I am not quite sure if the thing is in his line.

"Copy"

B. Srinivasa Rao

Deputy Commissioner,

Kolar District.

85.

Inst. 1853-79

D.O.No.C.258 dated 15th February 1918 from the Deputy Commissioner, Kolar District, to Dr. Sreenivasa Rao, Sanitary Commissioner, Government of Mysore, Bangalore.

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Many thanks for your kind D.O. of the 13th instant. I have asked Dr.O'Donnell for an estimate and he has promised to give me particulars after his return from Madras where he is at present. I am led to understand that there are a couple of people in Madras who know about this Ultra Violet Ray Treatment. I believe Dr. Gibson is the name of one of the Gentlemen. In the course of the Sanitary Board discussion to-day, it was suggested that the electrification of the pumping plant at Bethmangala which the Government have in view would harmonise quite well with the Ultra Violet Ray treatment. The difficulty for fuel would be greatly minimised if the pumping plant at Bethmangala is run by electricity. Roughly about 5 quartz tube lamps worth about 50 £ each would be required and the consumption of current does not appear to be large. To carry electricity at high voltage for applying to the Mains will be the only important thing so far as can be seen at present. I shall send you the estimate from Dr.O'Donnell as soon as I receive it. The installation for the Ultra Violet Ray treatment will be something quite up-to-date in our country and I am glad to hear from you that you will submit the estimate to Government for sanction when it is received from Dr. O'Donnell.

"Copy"

Deputy Commissioner,

Kolar District.

88

Enc to ex B53-09

D.O.No.136 dated 26th February 1918 from the Deputy Commissioner, Kolar District, to Dr.O'Donnell, Chief Medical Officer, Kolar Gold Field

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I send you a copy of letter from Mr. Forbes regarding the purification of the water supply to the Gold Mines by means of Ultra Violet Ray apparatus. I shall ask the Sanitary Commissioner also for bacteriological data of the water to be purified, but if you can also give me some particulars, I shall be glad to forward them. I am asking Mr. Forbes for a copy of the article in the Engineering News-record and on receipt, I shall send you either the original or a copy of it.

I am communicating a copy of your letter dated 19th February 1918 to Mr. Forbes and the Sanitary Commissioner for information and necessary action.

"Copy".

Deputy Commissioner,
Kolar District.

85

Enclosure 1383-179

D.O. letter dated 19th February 1918 from Dr. O'Donnell, Chief Medical Officer, Kolar Gold Field, to the Deputy Commissioner, Kolar District.

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Yours of the 15th instant enclosing copy of the Sanitary Commissioner's letter dated the 13th idem.

I was unable to get anything in the way of an idea of the cost for an installation of the Ultra Violet Rays in Madras.

Mr. Hopkins has some literature on the subject.

I would advise you to write to Messrs. Simmens Brothers, Madras asking them for an estimate.

In my opinion if the scheme is adopted they should be placed on the north and south mains leaving the Reservoirs at Champion Reefs. This would send the sterilized water direct into our mines. You should mention that 1,000,000 gallons are passed through the above mains daily.

"Copy"

Deputy Commissioner,

Kolar District.

88

File No B83719

D.O.No.60 dated 18/22 th February 1918 from the Chief Electrical Engineer to the Government of Mysore, to the Deputy Commissioner, Kolar District.

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I have your D.O.No.C. 242 of the 9th instant, regarding the purification of the water supply to the Gold Mines by means of Ultra Violet Ray apparatus and would refer you to a very interesting article in the issue for ~~November~~ November 29th 1917 of Engineering News-Record, which I shall be pleased to send if you cannot obtain a copy at your place. I shall also be glad to get into communication with the Engineers concerned if you can supply complete bacteriological data of the water to be purified.

It would appear that to completely eliminate the B. Coli by this method, it would cost us about Rs.7-8-0 per million gallons and the capital costs for the necessary equipment would not be more than Rs.25000/-

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"Copy"

Deputy Commissioner,

Kolar District.

18.

Enc to LB 83-17-i

D.O.No.137 dated 26th February 1918 from the Deputy Commissioner, Kolar District, to the Chief Electrical Engineer, Government of Mysore, Bangalore.

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Many thanks for your kind letter of the 18/22 th February 1918. I shall be much obliged if you can kindly send either the original or a copy of the article in the issue for November 29th.1917 of Engineering News-Record regarding the Ultra Violet Ray apparatus. I enclose a copy of letter from Dr.O'Donnell regarding the Ultra Violet Ray treatment of water. I am asking both Dr.O'Donnell and the Sanitary Commissioner for Bacteriological data of the water to be purified and on receipt of information I shall send it on to you.

"Copy"

B. Venkata Rao

Deputy Commissioner,

Kolar District.

85

Enc to 2855-17-9

D.O.No.C.259 dated 15th February 1918 from the Deputy Commissioner Kolar District, to Dr. J.D.O'Donnell, Chief Medical Officer, Kolar Gold Field.

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Thanks for your kind letter promising to send me further particulars about the Ultra Violet Ray treatment after you return from Madras. I am glad to send you the accompanying copy of letter from the Sanitary Commissioner to the Government of Mysore. I think that if you will kindly send an estimate of the probable cost of having an installation for the Ultra Violet Ray treatment on the Kolar Gold Field,.there.is every probability of the scheme being sanctioned.

"Copy"

B. Sankara Rao

Deputy Commissioner,

Kolar District.

18

Enc to dlr 83-17-9

D.O. No.138 dated 26th February 1918 from the Deputy Commissioner, Kolar District, to ~~the~~ Dr. Sreenivasa Rao, Sanitary Commissioner, Government of Mysore, Bangalore.

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I send you copies of letters from Mr. Forbes and Dr. O'Donnell. I shall feel myself much obliged if you can supply complete bacteriological data of the water to be purified.

"Copy"

Deputy Commissioner,
Kolar District.

# Government of His Highness the Maharaja of Mysore.

## GENERAL AND REVENUE DEPARTMENTS.

D2754
Lb 83 17-10

## G. O. No. G. 13632-47—Geol. 102-17-1, dated 5th April 1918.

**Notes made by the Second Member of Council during his tour in the Kolar Gold Field.**

Issues responsibility sheet in respect of the questions referred to in the ——

W D A2065—GPB—11-4-18—125

**Notes made by the Second Member of Council during his tour in the Kolar Gold Field**

No. G. 13632-47—Geol. 102-17-1, dated 5th April 1918.

## PROCEEDINGS OF THE GOVERNMENT OF HIS HIGHNESS THE MAHARAJA OF MYSORE.

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### GENERAL AND REVENUE DEPARTMENTS.

**Order No. G. 13632-47—Geol. 102-17-1, dated 5th April 1918.**

The accompanying responsibility sheet has been prepared in respect of the questions referred to in the notes of discussion by the Second Member of Council with the Kolar Gold Fields Mining Board on the 13th and 14th March 1918. The action to be taken with regard to each item of work, the name of the officer or officers responsible for its completion and the time within which the same should be completed are duly indicated therein.

The officers concerned are accordingly requested to see to the expeditious disposal of the questions within the time specified.

(Sd.) C. S. Balasundaram Ayyr

*Chief Secy. to Government.*

To—The Financial Secretary to Government.
The Secretary to Government, Revenue Department.
The Secretary to Government, Departments of Education and Agriculture.
The Secretary to Government, Public Works Department.
The Chief Engineer of Mysore.
The Officiating Director, Department of Geology.
The Chief Inspector of Mines in Mysore
The Conservator of Forests in Mysore.
The Officiating Inspector-General of Education in Mysore.
The Registrar of Mysore University.
The Inspector-General of Police in Mysore.
The Sanitary Commissioner in Mysore.
The Secretary to the Mysore Economic Conference.
The Revenue Commissioner in Mysore.
The Deputy Commissioner, Kolar District.
The Comptroller to Government.

Exd.—C. R.

No. G. 13632-47—Geol. 102-17-1, dated 5th April 1918.

Responsibility Sheet in respect of questions requiring decision referred to in the Notes of discussion by the Second Member with the Kolar Gold Fields Mining Board on the 13th and 14th March 1918.

| Serial No. | Subject | Summary of representation of the Kolar Gold Fields Mining Board | Remarks and action proposed | Officers responsible | Time for completion |
|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| 1 | Control over boilers and suitable arrangements—The question of introducing a Boilers and Prime Movers Regulation for Mysore on the lines of British Acts is under the consideration of Government and they have decided that special arrangements have to be made for the Kolar Gold Fields after consulting the Mining Board. | 1. The Regulations in British India are suitable more for factories and there are special local conditions to be considered so far as the Gold Fields area is concerned.<br>2. The draft may be sent to the Mining Board, before final adoption.<br>3. No one in the mines can be deputed as each mine has its own boiler expert and it is therefore desirable to have an outside Inspector for all the mines.<br>4. If such an Inspector is appointed, he will have enough work all the year round in the Gold Field area itself if proper inspection and testing have to be done.<br>5. The officer to be appointed under the Regulation should be properly qualified and necessarily of a higher status than the mechanical experts employed in the mines for Boilers inspection.<br>The officer for the Gold Field area should be at least of the status of an Assistant Engineer. | The appointment of a whole time Inspector of Boilers for the Kolar Gold Fields and of another Inspector of Boilers junior to him in rank for the rest of the State are necesary.<br>The officer on the Gold Fields area may be invested with the power of inspecting machinery. | The Director of Geology; The Chief Inspector of Mines in Mysore; The Assistant Secretary, Branch III. | 30th June 1918. |
| 2 | Timber supply of the Fields—The Kolar Gold Fields take 7 to 10 lakhs of rupees worth of timber and as such it is necessary that at least a fair portion of it should be supplied by the Forest Department direct through a depot or all depots, leaving the prices to ordinary trade conditions of supply and demand. | It would be very difficult to deal direct with Government and many questions may arise as to the rejections, etc. The Board are willing to take all that the Forest Department could supply at market rates and are of opinion that it would be better to get the supply through private contractors. If all the depots in the State were open to private contractors for the supply of timber to the Gold Mines the difficulty may be solved. It was additionally suggested that the mining companies would prefer to get sawn timber and if the Mysore Forest Department could sell timber sawn from their Government Saw Mills according to the specifications of ordinary requirements which the mining companies are prepared to furnish a very large demand may be created. The Board represent the difficulty of transport and request the Government to put some pressure on the Railway companies for the supply of waggons. | Orders may issue to the Conservator of Forests to open all the depots and to get the specifications for sawn timber and make every attempt to increase the supply to the Gold Mines from the Mysore forests as far as possible. The Railway Companies may be addressed. | The Revenue Secretary;<br>The Conservator of Forests. | 30th June 1918. |
| 3 | Training of Mysoreans in the Fields. | The Mining Board are willing to take the students who passed out of the Engineering College or from the Mechanical Engineering School, Bangalore, and take them at the rate of one for each mine every year, if necessary, and give them a two years' course. Such students should have a fairly good general education and a grounding in general engineering before they are deputed for training. They are not in favour of any mining night schools or schools for the training of mining artisans. | There is a proposal pending regarding a scheme for study in Mining and Metallurgy and when it is received from the University the whole question may be further considered. | The Secretary, Education and Agricultural Departments; The Inspector-General of Education; The Registrar; Mysore University. | 1st July 1918. |

No G 13632-47—GEOL. 102-17-1 DATED 5TH APRIL 1918.

Notes of discussion by the Second Member with the Kolar Gold Fields Mining Board—*contd.*

| Serial No. | Subject | Summary of representation of the Kolar Gold Fields Mining Board | Remarks and action proposed | Officers responsible | Time for completion |
|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| 4 | Augmentation of Police in the Gold Fields. | The Mining Companies have been representing for a long time (since 1914) that patrol is insufficient and therefore some additional Police may be employed for the purpose. | At the last session of the Representative Assembly it was said that the representation of the Companies on the subject would be considered and orders would be issued before the end of March 1918. The present Inspector-General of Police has sent proposals involving a cost of Rs. 6,000 per annum. These proposals may be considered. | The Inspector-General of Police, and the Assistant Secretary, Branch III. | 20th April 1918 |
| 5 | Roads | The Board suggest that (1) Betmangala road, (2) Bowringpet to Kolar road and (3) Big tree to Bowringpet road, may receive greater attention in future. | It has been pointed out to the Board that the majority of roads are in a pretty fair condition and that the proposal of the Executive Engineer for an increase in the annual allotment to some of the roads is pending orders in the Public Works Department. | The Revenue Secretary, the Chief Engineer and the Secretary to Government, Public Works Department. | 30th June 1918 |
| 6 | Kolar Gold Fields Water supply. | The representation of the Mining Board was that in 1906 the then Dewan Mr. Madhava Rao came and discussed the question and promised to remove the villages which contaminated the water-supply. Their present representation was that wet cultivation should be prohibited within a quarter of a mile of the water-spread of the tank and river, that the new scheme for the ultra violet rays should be adopted, that the capacity of the coagulated tanks should be doubled, that better alum should be used for the filters and that greater supervision should be exercised over the filters generally. | The immediate steps that may be taken are—<br>(1) A more satisfactory arrangement for looking after the pumps and filters<br>(2) Constituting the villages into a sanitary area and supplying those villages with wells<br>(3) Appointing a Committee consisting of the Government Medical Officer, Medical Officer of Health Kolar Gold Fields, and Superintending Engineer in charge of Water supply, to periodically inspect the tank and the works, say, once a quarter and make a report to Government after examination of the supply bacteriologically<br>(4) Further investigation regarding the ultra violet rays as well as the Thimmarayavoddu Scheme and increasing the capacity of the coagulating tank;<br>(5) Renewal of the pump which as agreed to by Mr. Bhore is not working satisfactorily, even after repairs, at a cost of Rs. 2,000;<br>6) The supply of better alum. | The Chief Engineer, the Revenue Secretary, the Sanitary Commissioner and the Deputy Commissioner, Kolar District. | Do |
| 7 | Magistracy | As there is a large European population, the responsibility of the Mining Board in regard to them is very onerous and they request the Government to provide them with the jurisdiction which they are entitled to under the Criminal Procedure Code. A Magistrate having the knowledge of local conditions should reside within the area. As Mr. Pritchard is shortly going on leave, he may be retained till the question is decided so that the Gold Fields may not be without a Justice of the Peace even for a short period. | As Mr. Pritchard will be away for six months if the leave is granted to him, the question may be again considered. | The Chief Secretary, Branch III. | 30th April 1918. |
| 8 | Police Jurisdiction on the Kolar Gold Fields Railway. | It would be of very great convenience if the Kolar Gold Fields Railway Police is, as before, placed in charge of the Gold Field Police. | The Inspector-General of Police is inclined to support the request of Mining Board. This is a very small matter of administrative readjustment and the request of Mining Board may be sanctioned | The Chief Secretary. | Do |

G. R. S. VI—G/32]

Sno 6477

SUBJECT..... K.G.F. Water Supply.

*Diary No. of letter replied to* 2754

Section LB
File No. 8377
Serial No. 11

GENERAL AND REVENUE SECRETARIAT,
( )
, the 191 .

No. 6381-3 LB 83-174 dt 11.5.18

*Date of issue*.....

*Signed by* Mr B.T. Kesavadas

To
The Chief Engineer
The Sanyboard
The Deputy Comm. Kolar.

Sir,

I am directed to invite your attention to the item No 6 of the Responsibility Sheet issued with Go. No. 13632-47/ Genl-102-17-1 dt 3/4/1918 and to request you to be so good as to submit your proposals ~~on the several points noted~~ intimate by the end of current month in ~~Submit before the 30th June 1918~~ the action taken or proposed to be taken in respect of the items relating to your department in col 4 of the Resp^y sheet

over.

I have seen
MV 9.5.18
Revenue

MK
7/5

"O"

in Column 4 of the Sheet before
the 15th June 1918. in order
that final proof of Covers
may be passed before
the date.

I have &c.

H.Q. Secy to Govt
Mn. Rec. Deptt.

*List of enclosure*

*Copied by*

*Examined by*

WD 86—GPB—60,000—15-11-16

No. G.C. 432 – 10 Elour.

D 2961

LB 83-17-B

Office of the Sanitary Commissioner
with the Government of His Highness
the Maharaja of Mysore,

Dated, Bangalore, 22 - 5 1918

From

M. Srinivasa Rau Esquire., M.A., M.D., B. SC., (Edin)
D. P. H., (Cantab) & F. C. S., (London.)
*Sanitary Commissioner with the Government of His Highness the Maharaja of Mysore, Bangalore.*

To

B. Ramaswameiya Esq., B.A., B.L.,

*Secretary to the Government of His Highness the Maharaja of Mysore,* Revenue *Department,*
BANGALORE.

Sir,

In reply to your letter No. 6381-3/L.B.83-17-11, dated the 11th May 1918 enquiring what action was taken or is proposed to be taken in respect of the items relating to this department in column 4 of the Responsibility Sheet issued with Government Order No. 13632-47/Geol.102-17-1, dated the 5th April 1918, I have the honor to submit herewith a statement showing the stage at which the several questions stand.

I have the honor to be,
Sir,
Your most obedient servant,

M Srinivasa Rau

Sanitary Commissioner.

From

*The Sanitary Commissioner*
*in Mysore, Bangalore.*

To

*The Secretary to the Government*
*of H. H. the Maharaja of Mysore,*
Revenue ~~Department~~
*Bangalore.*

Dated
Despatched 22.5.18
Received 03440
23 MAY-1918
General No. G e 4 32-10.
No.

Enclosure No. One

**SUBJECT.**

Forwarding Statement showing the stage at which the several questions relating to the Kolar Gold fields water supply stands

Enclosure LB 83-17-13

Statement showing the stage at which the several questions relating to the Kolar Gold Fields Water Supply stand.

------ooo------

| I T E | R E M A R K S. |
|---|---|
| 1 A more satisfactory arrangement for looking after the pumps and filters. | The Chief Engineer for Irrigation in his letter No. 5968, dated the 18th May 1918 expresses the opinion that the essential requirements for efficiency is the periodical inspection at short intervals, to ensure that the local staff carry out their duties properly and have maintained the pumps and filters in a satisfactory condition. He proposes that the Executive Engineer, Water Supply Division and the Government Medical Officer may be constituted a committee for such inspection.<br>Also please see remarks against 3 |
| 2 Constituting the villages into a Sanitary Area and supplying those villages with wells. | I have recommended the appointment of a separate Sanitary Inspector for the area and placing him under the supervisory control of the Medical Officer of Health. The Deputy Commissioner reports that proposals will be sent up to Government as soon as possible, for sanction.<br>In regard to wells, it is reported that information is being collected and that a report will be made shortly. |
| 3 Appointing a Committee consisting of the Government Medical Officer, Medical Officer of Health, Kolar Gold Fields and Superintending Engineer in charge of Water Supply to periodically inspect the tank and the works, say once a quarter and make a report to Government after examination of the supply bacteriologically. | It is desirable that before the Committee meet there should be a set of rules ready to regulate the inspections. The Health Officer has been instructed to prepare a set of draft rules.<br>The Deputy Commissioner thinks that Dr. O'Donnell as representing the Mining Board, ought to be included in the Committee. This may be done. |
| 4 (a) Further investigations regarding the ultra-violet rays. | Mr. Forbes has the matter in hand. |

(b)

Deputy Commissioner's Office,
Kolar District,
Dated Kolar, the 30th May 1918.

Ref No. HC 751 / 17-18 Encl

43 83 11-14

From

B.Venkoba Rao, Esq., B.A.,
Deputy Commissioner,
Kolar District.

To

B.Ramaswamaiya, Esq., B.A., B.L.,
Secretary to the Government of His
Highness the Maharaja of Mysore,
Revenue Department,
Bangalore.

Sir,

With reference to your letter No.6381-3 L.B. 83-17-11 dated 11th May 1918. requesting to be informed of the action taken or proposed to be taken re the supply of pure water to the Kolar Gold Fields, I have the honour to forward herewith for your information, a copy of my letter No. dated 30th May 1918 to the Revenue Commissioner in the matter.

I have the honour to be,
Sir,
Your most obedient servant

B Venkoba Rao

Deputy Commissioner
Kolar District.

W.D. 0244—GPB—6.00.000—19-5-16—S.

191

From

The Deputy Commissioner
Kolar District

To

The Revenue Secretary,
Govt of Mysore
Bangalore

Dated 30-5-18

Despatched

Received 1 JUN 1918

General No. H. 6751/ 04472
No.

Enclosure No. one G.H.V.

Improvement of K. C. R. water supply

Forwarding, for information, copy of letter to Revenue Commissioner

Submit

576

re to KB 83-17-14

Ref. H.E. 751
No. 17-18

Deputy Commissioner's Office,
Kolar District,
Dated Kolar, the 30th May 1918.

From

B.Venkoba Rao,Esq.,B.A.,
Offg. Deputy Commissioner,
Kolar District.

To

P.Raghavendra Rao,Esq.,B.A.,B.L.,
Revenue Commissioner in Mysore,
Bangalore.

Sir,

With reference to your docket No.C.3735 dated 8 th May 1918,requesting to be informed of the action taken re the supply of pure water to the Kolar Gold Fields, I have the honour to state as follows:--

With regard to the Ultra Violet Ray treatment of water, Mr. Forbes, Chief Electrical Engineer,Government of Mysore, has the matter in hand and further action has to be taken by him.

2. As Government have decided, in their Order No. R.10092-3 L.R. 2-15-297 dated 5th April 1918, that the proposal to convert Thimmaraya Voddu into a storage reservoir for water supply to the Kolar Gold Field, may be abandoned, I think there is no reason to re-open the question now.

3. As regards constituting the villages into a sanitary area, the proposal to appoint a separate Sanitary Inspector for the villages on the Palar will be considered at a meeting

of the District Board and a recommendation will be made to Government in the matter. With regard to the supply of wells to these villages, a reference has been made to Government in No.L.F.C.2171 dated 13th April 1918 stating that about 10000 Rs. will be required for the purpose. Definite proposals will be made after collecting all the necessary information.

LB 7217
81.21

4.With respect to other immediate steps proposed in column 3 of item 6 of the responsibility sheet sent by Government, it is primarily for other Officers to take necessary action, but I shall make a further reference discussing the views that I have gathered

I have the honour to be,
Sir,
Your most obedient servant,

Sd.B.Venkoba Rao,
Deputy Commissioner,
Kolar District.

"Copy"

B Venkoba Rao

Deputy Commissioner,
Kolar District.

W D A133—GPB—500—24-7-17

Telegraphic Address: *Stateworks*

D 3128

Ls. 6317-11

No. 6651 MYSORE P W DEPARTMENT.

CENTRAL OFFICE,

*Bangalore,* 15th May June 1918.

049-20

From

S. CADAMBI, Esq.,

*Chief Engineer for Irrigation,*

*Bangalore.*

*To*

B. Ramaswamaiya, Esq., B.A., B.L.,

Secretary to the Government of Mysore,

Revenue Department, Bangalore.

SIR,

With reference to your letter No.6381-3/L.B. 83-17-11 dated the 11th May 1918, regarding the Kolar Gold Fields water supply I have the honour to forward herewith, for your information a copy of this office letter No.5968 dated the 13th idem addressed to the Sanitary Commissioner on the subject.

2. On receipt of that officer's reply further needful action will be taken in the matter.

I have the honour to be,

Sir,

Your most obedient servant,

For Chief Engineer for Irrigation

J.R

Enc to LB 83-17-15

Letter No.5968 dated 13th May 1918 from the Chief Engineer for Irrigation to the Sanitary Commissioner with the Government of Mysore, Bangalore.

---

With reference to your letter No.G.O.432-3 dated the 1st May 1918, I have the honour to inform you that as regards the arrangements to be made for looking after the pumps and filters of the Kolar Gold Fields water supply, there is a qualified staff on the spot and adequate provision is made in the annual maintenance estimate of the water supply works for all that is required for their efficient maintenance. The only point for consideration is to see whether the local staff carry out their duties properly and maintained the pumps and filters in a satisfactory condition.

Is this to be a joint inspection? MK

2. I should propose that the Executive Engineer, Water Supply Division, and the Government Medical Officer may be requested to inspect the pumps and filters as often as convenient and not less than once a month, and submit a brief report on their condition.

3. Before the Committee Members are asked to meet, it may be necessary to have a set of rules to regulate the periodical inspection to be placed before the Members. As it is a question in which the Department of Health is more ~~entrusted~~ interested, I shall be obliged if you can conveniently arrange to frame some rules for the guidance of the Committee, in consultation with the Superintending Engineer, Southern Circle, if necessary.

4. A date may then be appointed for the meeting of the Committee.

---

True Copy

K A Subramaniam Ayyar

Assistant Secretary to Government,

Public Works Department.

J.R

L.7.C 1

GEN. & REV. SE... REVENUE 16 JUL 1918

OFFICE OF THE DEPUTY COMMISSIONER,

KOLAR DISTRICT

DATED KOLAR, THE 2nd JULY 1918.

From

B. Venkoba Rao, Esq., B. A.,
Deputy Commissioner,
Kolar District.

To

C. S. Balasundaram Iyer, Esq., B. A.,
Chief Secretary to the Government of
His Higness the Maharaja of Mysore,
B A N G A L O R E.

Sir,

With reference to item 6 ( Kolar Gold Field Water Supply ) of the responsibility sheet issued with Government Order No. 13632 - 47 Genl. 102-17-1 dated the 5th April 1918, I have the honour to enclose herein a copy of my letter No. 751/H.C., dated 30th May 1918, addressed to the Revenue Commissioner in Mysore, and to state as follows :-

2. With reference to the appointment of a Committee as mentioned in para 3 of item 6 of the responsibility sheet, the Sanitary Commissioner and myself discussed the question in Mysore, on the 23rd June 1918, and probably the Sanitary Commissioner has made a separate report, on the subject.

Either the Superintending Engineer of the Water Supply Division or the Executive Engineer of that Division and the District Sanitary Officer of Kolar, and the

Health

the Health Officer, Kolar Gold Field will have to be members of the Committee, The Committee will meet once a quarter and examine, how the plant at Bethmanagala is working. The report of the Committee may be sent to the Sanitary Board where all the members of the Sanitary Board will have an opportunity of examining the same.

The Committees' report will have also to be submitted direct to Government for necessary action, if any, and record.

3. The question of constituting the villages on the Palar into a special Sanitary area and supplying ~~these~~ them with wells was discussed at the last meeting of the District Board held on the 10th June 1918 and the following resolution was passed.

" The District Board are not willing to hand over the jurisdiction of the villages on the Palar up to Bethmangala to the Sanitary Board. The District Board will take necessary measures for the proper sanitation of the area. The villages may be constituted into a special sanitary area and an officer with establishment that may be necessary may be appointed to look after the sanitation under the control of the District Sanitary Officer. The area may be supplied with necessary wells and a recommendation made to Government for needful help. "

Vide para 7 of letter 31 dated 14.7.17 L.B. 72-17-11-26-34.

As regards ~~the~~ supplying these villages with wells, a requisition was made in my letter No. 2171 dated the 13th April 1918, and the Government have been pleased to sanction a sum of Rs. 10,000/- for the purpose, ( included in Rs.20,000/- in their order No. 6700- 9 L. B. 72-17-34 dated the 28th May 1918, out of the allotment of 1½ lakhs for drinking water wells, in the State Budget. As already stated in my letter, sanction of Government has to be accorded for the sinking of these wells, entirely at the cost of Government, should contribution be not forthcoming from the villagers.

5. As will be seen from the tracing enclosed, there are 21 villages on either bank of the river, which have to be constituted into a special sanitary area, and in order to safe-guard the water supply of the Field, and to look to the Sanitary condition of the said area, and to prepare estimates etc., for sinking wells in these villages, the following establishment is necessary:-

(1) Sanitary Inspector on 30 - 2/1 - 40 plus 20 Horse allowance , that is Rs. 50/-

1 Maistry on " 11/-

4 Sweepers at " 32/-
Rs. 8/- each

---

Total Rs. 93/- per mensem.

The staff will work under the control of the District Board and of the District Sanitary Officer.

6. The District Board have ( as will be seen from their resolution ) agreed to bear the cost of the establishment out of their funds.

7. Under the circumstances, I have the honour to request that you will be so good as to obtain early sanction of Government to the Boards' proposal viz.,

(1) to the constituting of the 21 villages into a special sanitary area,

2) to the entertainment of the Sanitary staff at a monthly cost of Rs. 93/-.

The extra cost involved will be met by reappropriation of grants in the Budget of the Board for the year 1918-19.

I have the honour to be,

Sir,

Your most obedient servant,

Deputy Commissioner,

Kolar District.

Encl to LB 63 17-16

Letter No. H. C. 751 / 30-5-1918, to the Revenue Commissioner in Mysore, Bangalore.

---------:OoO:---------

With reference to your docket No. C. 3735 dated 8/10th May 1918, requesting to be informed of the action taken regarding the supply of pure water to the Kolar Gold Fields, I have the honour to state as follows:-

With regard to the ultra violet Ray treatment of water, Mr. Forbes, Chief Electrical Engineer, Government of Mysore, has the matter in hand and further action has to be taken by him.

2. As Government have decided, in their order No. R.10092 -3 L. R. 2-15-297 dated 5th April 1918, that the proposal to convert Thimmaraya Voddu into a storage reservoir for water-supply to the Kolar Gold Field, may be abandoned, I think there is no reason to re-open the question now.

3. As regards constituting the villages into a sanitary area, the proposal to appoint a separate Sanitary Inspector for the villages on the Palar will be considered at a meeting of the District Board and a recommendation will be made to Government in the matter. With regard to the supply of wells to these villages, a reference has been made to Government in No. 2171 dated 13th April 1918, stating that about Rs. 10,000/- will be required for the purpose. Definite proposals will be made after collecting all the necessary information.

4. With respect to other immediate steps proposed in col column 3 of item 6 of the responsibility sheet sent by Government, it is primarily for other officers to take necessary action, but I shall make a further reference, discussing the views that I have gathered.

---

"C o p y"

Deputy Commissioner,
Kolar District.

3 27/7.

G. R. S. VI—G/32]

SUBJECT..... Proposals for improving K. G. T. Water Supply.....

*Diary No. of letter replied to* .. ....191.....

GENERAL AND REVENUE SECRETARIAT)

( )

, *the* 191

*Date of issue*.....27.7.18.....

*Signed by*....for B. T. Kesava Rao.....

Section LB.

File No. 83-17.

Serial No. 18

No. 1736

LB 83-17-18

dt 27.7.18

To

The Dy Comr. Kolar Dt

Sir,

With reference to the correspondence ending with your letter No. L.T.C.1 dt 2.7.18 regarding the question of improving the sanitary of certain villages on the Palar with a view to protect the water supply to the K. G. T. I am directed observe that it is not clear why any abstruct name should

over.

comp

D. 27/7/18

are given to the area comprising the 21 villages in question if the administration of the said area is to continue under the District Board, and, if the area is to be treated as a special one for the purposes of protecting the sanitation and water supply of the K. G. F. area and a separate Establishment has to be entertained therefor, why the Sanitary Board should not be required to share the financial responsibility in respect of the aforesaid Special Establishment.

I am further to point out that it is not correct on principle to debit the whole cost of the Special Establishment to Dist Fund as this will mean giving preferential treatment to a few Specified villages at the

*List of enclosures.*

*Copied by*

*Examined by*

WDS6—GPB—60,000—15-11-16

G. R. S. 27]

GENERAL AND REVENUE SECRETARIAT.

(*Continuation sheet draft form.*)

expense of the others in the district. I am therefore, to request you to place the matter before the K. G. F. Sanitary Board and ascertain their views in regard to their willingness to contribute towards the maintenance of the special establishment seeing that it is in their interest these special arrangements have been found necessary

As regards sinking wells in the villages in question entirely at Govt. cost I am to request you to submit definite proposals showing the number of wells now existing, the number of wells newly required and the probable cost of construction thereof.

I have &c

W 26.7.18

W 25.7.18 Rev. Secy

GPB—12,000—15-2-13.

GEN. & REV. SECRETARIAT I REVENUE. 16 JUL 1918

Dno 251

No. 80 11

Mysore Public Works Department,

Central Office, LB 8317 22

Dated Bangalore, 4th July 1918.

STC

From

The Chief Engineer of Mysore

Bangalore.

To

The Sanitary Commissioner with the Government of

Mysore, Bangalore.

Sir

I have the honour to invite reference to correspondence ending with this office No.6652 dated the 1st June 1918, regarding the Kolar Gold Fields Water Supply and to request the favour of an early reply thereto

2. I beg to add that the period fixed by Government for the disposal of the question, viz., 30th June 1918, has already expired.

I have the honour to be,

Sir,

Your most obedient servant,

Pro. Sec. to GR

sd. R.V. Sundaram Iyer,

for Chief Engineer of Mysore.

P.R.R.-2/4-7-18.

07754

No. 80/2 dated Bangalore, 4th July 1918.

STC

Copy of the above is forwarded, with compliments, to the Revenue Secretary to Government, for information, with reference to correspondence ending with this office No.6652 dated the 1st June 191

R V Sundaram

for Chief Engineer of Mysore.

Ni

No 2665

L.B. 8317-22

L.F.C No. 1/18-19

GEN. & REV. SECRETARIAT
I
REV
23 AUG 1918
23 AUG

Office of the Deputy Commissioner,
Kolar District.
Dated Kolar, the 19th August 1918.

From

B. Venkoba Rao, Esq., B. A.,
Deputy Commissioner,
Kolar District.

12728

To

B. Ramaswamaiya, Esq., B. A., B. L.,
Secretary to the Government of
His Highness the Maharaja of Mysore,
Revenue Department, B A N G A L O R E.

Sir,

Adverting to your letter No. 1736/L.B.83-17-18, dated the 27th July 1918, in connection with the question of improving the sanitation of certain villages on the Palar with a view to protect the water supply to the Kolar Gold Field, I have the honour to state that I have this day addressed the President of the Kolar Gold Field. Sanitary Board, to place the matter before the next meeting of the Board. Their views will be ascertained and communicated later on after the meeting of the Board is over.

2. As regards sinking wells in the villages in question at Government cost, a detailed statement showing the existing source of water supply in these villages, the number of new wells required and their estimated cost is herewith submitted. Twenty six wells at an estimated cost of Rs. 7,000/- will have to be provided in these villages.

I have the honour to be,
Sir,
Your most obedient servant.

Treasury Assistant-Commissioner
for Deputy Commissioner
Kolar District.
(Absent from station)

1918 - 1919

From
The Deputy Commissioner
Kolar District.

To The Secretary to the Governmen
of H. H. the Maharja of Mysore,
Revenue Department. Bangalore.

Dated Kolar the 20th August 1918.

Despatched 20th August 1918.

Received

General No. C. 7. 1918-19
No.

Enclosure No. One

REV. 3 AUG 1918

Submitting a report, on the improvement of Sanitation, of certain villages on the Palar, with a view to protect the water supply to the Kolar Gold Fields and stating that the matter will be placed before the Sanitary Board. Kolar Gold Field, and their views submitted after the next meeting of the Board is over.

Statement showing the number of wells required in the villages along the river Palar.

| Serial No. | Name of village. | Population. | Present source of water supply. | New wells required. No. | Cost. | Remarks. |
|---|---|---|---|---|---|---|
| 1. | Bethmangala old | 750 | Tap water being used. | | | supply sufficient. |
| 2. | Vodi Kothur. | 45 | 2 private wells, water sweet. supply sufficient. | 1 | Rs. 150 ~~400~~ | For improving the well to north of the village. |
| 3. | Vodhalli. | 108 | 1 Government well and 1 private public well not used. Take water from tank. | 1 | 400 | Requires a new well in the village. |
| 4. | Kavaraganahalli. | 131 | 6 private wells with good water. | 1 | 200 | One of them to be improved and reserved for ~~boayers~~ Holiars. |
| 5. | Kothur (Madra) | 42 | Four private wells with good water. | 1 | 200 | One of them to be improved. |
| 6. | Hulkur | 207 | 2 wells contain good water. Not sufficient. | 2 | 400 | One for the villagers, one for the holeyers. |
| 7. | Hangala | 394 | 2 contain good water. Scanty. Big villages. | 2 | 700 | -----Do----- |
| 8. | Voddahalli | 161 | 1. well. very scanty. | 1 | 300 | -----Do---- |
| 9. | Natta | 98 | 3 wells. Sufficient. Holeyars take river water. | 1 | 250 | For the holeyars. |
| 10 | Nallur. | 220 | 3 private wells. (one Government not used. water brackish.) | 2 | 500 | One for the villagers, one for the holeyars. |

| | | | | | | |
|---|---|---|---|---|---|---|
| 11. | Angethahalli. | [illegible] | [illegible] good water | | | public well Rs.100/- one for the holeyars Rs.200/- |
| 12. | Thimmasandra. | 32 | 2 private public wells. Not sufficient | 2 | 600 | 1 for the villagers Rs.300 1 for holevars.Rs.300/- |
| 13. | Madinaikanahalli | 87 | 1 Govt.well in the extension far from the villages. | 1 | 250 | One in the old village proper. |
| 14. | Javamangala. | 250 | 3 wells brackish water. River water used. | 2 | 600 | one for villagers, one for holeyars. |
| 15. | Tambarlahalli. | 76 | Villagers take Vokkare water.Not sufficient. | 1 | 300 | ----Do---for villagers |
| 16. | Sirasandra. | 118 | Nowell. River water used. | 1 | 300 | ----Do---- do |
| 17. | Shindahalli. | 96 | No well. --Do-- | 1 | 300 | ---Do--- do |
| 18. | Holali | 173 | 1 well for brahins | 2 | 700 | 1 for villagers one for holeyars. |
| 19. | Minjanahalli. | 283 | ~~New well~~ supply sufficient. | | | |
| 20. | Puttari | 72 | villagers take river water. | 1 | 280 | for the ~~holeyar~~ villagers |
| 21. | Chinnappalli. | 12 | River water used. villagers poor | 1 | 280 | For the holeyars. |
| | | | | 26 | 7010 | |

This list includes "Bellamangala old" and ~~leaves~~ omits (1) Iyapalli and (2) Kula Holali.

Mustafa Kabir
for Deputy Commissioner.
Kolar District.

Secy. to Govt. Rev. Dept.

Dtd. 23-7-32

Draft

(Issued)

G.R.S. VI-71]

SUBJECT Sanctioning wells in the 21 villages on the Palar.

Diary No. of letter replied to 2665

Section L.B.
File No. 83-17
Serial No. 115

General and Revenue Secretariat
( )
, the 191

*Proceedings of the Government of His Highness the Maharaja of Mysore.*

Date of issue 14-9-18

Signed by for BTK

H-F

*Read.*— G.O. No. G. 13632-47 Genl. 102-17-1 & 5-4-18 assuming responsibility Sheet in respect of the questions referred to in the notes of discussion by the Second Member of Council with the Kolar Gold Field Mining Board, ~~on the 13th~~ and 14th March 1918, and directing.

Order Thereon:— ~~No.~~

~~Considering that~~, among other things, ~~the 21 villages on the banks of the Palar should be~~ that immediate steps should be taken to provide the villages on the Palar which ~~are contaminated~~ contaminate the water supply of the K.G.F.

over.

~~protected~~ with wells, ~~as~~
~~one of the immediate steps~~
~~to be taken in connection with~~
~~the question of safeguarding~~
~~the purity of water supply of~~
~~the Kolar Gold Field.~~

2 Correspondence ending with
letter no. L.F.C. 1/18-19 dt. 19-8-18 P.W.D
from the Dy Comr Kolar dt.
submitting a statement showing
the existing State of water supply in the
~~two~~ villages referred to in the
which are 21 in number
above order and stating that
26 additional wells at an estimated
cost of Rs. 7000 are necessary for ~~the~~ 21 villages. List of enclosures
and requesting sanction to the execution
of these well works entirely at the cost
of Govt. in case ~~the~~ contributions are not
forthcoming from the villagers.

Order no. 4402-8 dt 18/9 Copied by

Examined by

The proposal of the Dy Comr
is sanctioned.

2 Dy Comr. Kolar dt.
Presidt Secy. B.P.W.F.
Comptr.
Chief Engr &
Sanl Comr

Secy to Govt.
Rev. Deptt.

No. 10629

MYSORE P. W. DEPARTMENT
CENTRAL OFFICE,
Bangalore, 28th August 1918.

From

Rao Bahadur
K. KRISHNA IYENGAR, Esq., M.A., M.C.E.,
The *Chief Engineer for Irrigation,*
*BANGALORE.*

To,

The Sanitary Commissioner with the Government
of H. H. the Maharaja of Mysore, Bangalore.

Sir,

With reference to correspondence ending with your Memo No.G.C.357-2 dated the 2nd February 1918, I have the honor to forward herewith a copy of letter No.6261/E.357-18 dated the 9th August 1918, received from the Superintending Engineer, Southern Circle, reporting that, for reasons therein given, there is no necessity to renew the sand of the Jwell Filters at Bothamangala and to enquire whether, in the circumstances stated, you consider any further treatment of water is necessary. A copy the report received from the Jewell Filter Expert on the subject is also enclosed.

13699

2. The favour of very early reply is requested.

I have the honour to be,
Sir,
Your most obedient servant,

Sd. R.V.Sundaram Iyer,
For Chief Engineer for Irrigation.

P.R.R.-3/28th.

No. 10630 dated Bangalore, 28th August 1918.

Copy of the above (with copies of Superintending Engineer, Southern Circle's No.6261/E.357-18 of the 9th August 1918 and the Jewell Filter Expert's report) is forwarded, with compliments, to the Secretary to Government, Revenue Department

REVENUE SECRETARIAT 29 SEP 1918

for information, with reference to this office No.9295 dated the 1st August 1918.

R W Sundaramma

For Chief Engineer for Irrigation

Exh to LB83-17-24

Letter No.6261/E.357-18 dated the 9th August 1918, from the Superintending Engineer, Southern Circle, to the Chief Engineer of Mysore, Bangalore.

:{9}:

With reference to your No.1870 dated 13-2-1918, forwarding copy of letter No.G.C.357 dated 2nd February 1918, from the Sanitary Commissioner in Mysore, to the Chief Secretary to Government, re the renewing the sand of the Jewell Filters at Bethamangala,

I have the honor to submit herewith an estimate amounting to Rs 2,721/- together with a report for renewing the sand of all the Filters at Bethamangala with fresh sand from Seringapatam for favour of early orders.

2. The Executive Engineer reports that the Jewell Filter expert, who visited the place in February 1918, was of opinion that there is no necessity for renewing the sand.

3. He further reports that the result of analysis after the filters were thoroughly overhauled was satisfactory and says that there is no necessity for the renewal of sand.

4. A copy of the report received from the Jewell Filter expert is herewith enclosed for information. It is also reported that sulphate of alumina of a better quality is now used and the results are now satisfactory.

Letter No.Ref.No.J.116/Rwl./D. dated the March 25th 1918, from Messrs. Worthington Simpson Ltd., 10, Clive Street, Calcutta, to the Executive Engineer, Water Supply Division, Bangalore.

==========

Ref: 410.

Yours of the 21st received regarding the apparatus for sterilization of water. The apparatus which Mr.Hopkins spoke to you about, is designed for supplying liquid chlorine and unless you are particularly anxious to instal this apparatus now, we urge you to wait until the close of the war before considering the matter by reason of the great difficulty in securing chlorine at present. This is the method which has been adopted largely in America and consists of applying liquid chlorine under pressure through a very delicate apparatus which is made up very largely of alluminum, copper and silver. The liquid itself is shipped in containers which are steel shells tested to approximately 500 lbs. pressure.

At the present time owing to the use of chlorine gas in the war fronts, it is practically impossible to secure chlorine in this form owing to the scarcity of containers. We have endeavoured to procure this from Japan but without success.

The price for the apparatus have also increased very materially since the writer left America on the latter part of last year and any quotation made to you would have to be confirmed by the manufacturers as this apparatus is of such special character that it would have to be made by the

American manufacturers.

Hypochlorite of lime. As you doubtless know, hypochlorits of lime could be used and this chemical can be purchased locally, but considering the prejudice of your people, we strongly advise you to give up the idea of using this form of sterilization unless you are prepared to experience the usual difficulty which is experienced in the use of chlorine in this form. It is a very dirty chemical to handle, requires a very complicated apparatus and the possibility of tastes and odours is very much greater than with the form of chlorine first mentioned.

Recently we have been approached by the representative of Pearsons Antiseptic Co., Ltd., whose address is 12, Government Palace, East, Calcutta. They claim to have developed a weak solution of chlorine for which they claim excellent result. It might be an advantage for you to communicate with them if you are really desirous of adopting some method of treatment after filteration although we cannot recommend the chemical referred to as we know nothing about it as yet.

In our opinion sterilization is absolutely unnecessary at Bethamangala for if your operators will only use the proper quantity of alumina and will wash the filters with sufficient wash water, there will not be any bad results. The plant referred to has given good result and there is no reason why this should not continue to do so In our opinion any "after treatment" will not be required for any Jewell Plant of gravity filters in your Districts if the simple rules covering the operation of such plant are followed. The use of chlorine presents difficulties that are not easily overcome and any one not conversant

with the use of such a chemical, will find some embarassing situation developing in connection with the use of the same.

Wash water, Bethamangala.- It is quite evident that the wear on the clutches of the agitators at Bethamangala is due to insufficient wash water. As pointed out by Mr.Hopkins, your operator should not wash a filter until the sand is sufficiently liquid for the rakes to sink to a vertical position of their own weight. If the rakes do not sink in that way, there is not sufficient water, and in consequence the operation of the agitator entails wear and tear owing to the resistance of the sand which is not sufficiently liquidified. It is possible that your Pelton wheel and wash pump are not delivering the same quantity of wash water as originally delivered and if this is the case, a certain amount should be taken from the rising main as originally provided for in that plant. If you investigate, you will find that the valve on the wash main is provided with hand wheel which was specially cut to take a padlock which allowed for the valve to be opened to a fixed point. The only reason that this valve was not used was because it was found necessary to run two engines at a time in order to supply sufficient water for washing.

"C o p i e s".

Assistant Secretary to Government,

Public Works Department.

H.R.R.-2/28th

157.38
23 SEP 1918
D4388
No. M 10973
SEP 1918
L383-7

Mysore Public Works Department,

Central Office,

Dated Bangalore, 13th September 1918.

From

S. Cadambi, Esq.,

Chief Engineer of Mysore,

Bangalore

To

B.Ramaswamaiya, Esq., B.A., B.L.,

Secretary to Government,

Revenue Department,

Bangalore

Sir,

With reference to G. O. No.G.13632-47 Geol.102-17-1 dated 5th April 1918 issuing responsibility sheet in respect of questions referred to in the Notes made by the Second Member of Council during his tour in the Kolar Gold Fields, I have the honour to state as follows in regard to questions referred to the Public Works Department:-

2 Item 5-Roads.- I enclose a copy of the report with enclosures on the roads under reference from the Superintending Engineer, Northern Circle soliciting sanction for increased grant for maintaining the above roads. The reference will be disposed of in the usual course.

3 Item No.2 - Kolar Gold Fields Water Supply.- I enclose a copy of report from the Superintending Engineer, Southern Circle dealing exhaustively on all points raised.

(1) A more satisfactory arrangement for looking after the pumps and filters.

The supervision of the Bethamangala plant is satisfactory. I inspected the works in July last and I endorse what the Superintending Engineer says about it.

(2) Constituting the villages into a sanitary area and supplying those villages with wells, and

(3) Appointing a Committee, &c.

4 The Committee consisting of the Executive Engineer, Water Supply Division, Health Officer, Kolar Gold Fields and the District Sanitary Officer, Kolar District has been formed, and the proceedings of the first meeting held on 17th August 1918 from an enclosure to the Superintending Engineer's report.

5 The rules framed by the Sanitary Commissioner for periodical inspections by the Committee appear suitable and may be adopted.

6. Detailed rules for the proper arrangement for preventing pollution of water by the people residing in the villages between Bethamangala and Holale on either side of the river have been framed. The villages that are to be formed into a sanitary area are enumerated in the statement accompanying.

Though the rules appear drastic, yet in the interests of pure water supply to the Fields they may be adopted.

7. The items 4 & 5 have been dealt with in detail in the Superintending Engineer's report.

I have the honour to be,

Sir,

Your most obedient servant,

R V Sundaram

For Chief Engineer of Mysore.

15

21 SEP 1918

Exts LB.83-12-25

REGD. NO.....
24 AUG 1918
MYSORE P. W. DEPT.

The Committee appointed to conduct the periodical inspection of the Bethamangala Water Supply, met at Bethamangala at 1 P.M. on the 17th. August 1918.

Members present.

Dr. Mascarenhas.

Dr. David

Mr. S.Sreenivasa Iyer.

I. Read and recorded the rules for the periodical inspection forwarded by the Superintending Engineer.

II. The following detailed rules as required in paragraph 8 of the above were considered, discussed and passed:-

1. (a) One Sanitary Officer must be appointed for the special Sanitary area covering 22 villages on the Palar river between Holali and Bethamangala. The names of the villages are given in the accompanying statement).

   (b) It is considered desirable to have for this post a Sub Assistant Surgeon for the special reason that if any infectious diseases occur, he would be able to deal with the epedemic expeditiously.

2. The Sanitary Officer shall regularly inspect all the villages under the Sanitary area and submit his diaries ~~and~~ of inspection to his immediate official superior, who will be either the District Sanitary Officer, or the Health Officer, Kolar Gold Fields, as may be settled by the Deputy Commissioner and the Sanitary Commissioner.

3. Such village should be provided with a minimum of 2 wells one for caste Hindus and the other for Panchamas; the number of wells to be regulated by the population of the village These wells, as far as feasible, must be dug on that side of the village which is farther away from the river.

   The wells should have proper rivetment and impervious

impervious platform with proper arrangement for draining the waste water; preferably pumps being installed for drawing water.

4. After the wells are dug and made available, approach to the river for washing clothes etc., drinking or bathing should be made penal.

5. No person shall take his cattle to the river for watering or washing nor graze the cattle on the river side of the village. (A trough to be provided within the village limits for the use of cattle)

6. No person shall store manure near the river.

7. Rearing of pigs in the special Sanitary area to be penalised.

8. The following rules for the prevention of cholera and plague have to be introduced:-

(a) Every person shall be bound to give immediate information to the Patel or Jodidar, or his agent, of the village, of any case of cholera or plague or of any illness suspected to be cholera or plague or of death from such disease that comes to his knowledge.

(b) During an epidemic of cholera or plague, any householder or a private medical practioner (vidyars or hakims) who may have a knowledge of such illness in which such symptoms of plague or cholera are exhibited or of a dealth likely to be due to such prevalent epidemic shall be bould to give immediate information.

(c) It shall be the duty of the Patel or Jodidar or his agent to whom such information is given to institute or cause to be instituted immediate enquiry as to the nature of such disease or the cause of such death and to report th result of such enquiry to the Sanitary Officer appointed to inspect the villages of the special Sanitary area.

(d) Any person found suffering from cholera or plague shall be removed to a segregation camp which shall be fixed on that side of the village which is farther away from the

the tank or river, for treatment, by a written order from the Sanitary Officer; and all persons residing in the building in which such desease occurs shall be segregated by a similar order.

(e) Persons infected or suspected to be infected with plagu cholera or small pox and persons residing in the local -ty in which such disease has occured may be prohibite by a written order from the Sanitary Officer from leav ing such locality unless and until the Sanitary Office certifies that they may be safely permitted to do so.

(f) The Health Camp erected during the prevalence of plague or cholera shall be situated on that side of the village which is farther away from the river or tank.

(g) No dead bodies shall be burried or cremated within a distance of4 furlongs from the tank or river.

(Sd) S.Srinivasa Aiyar.
(Sd) G.S.David.
(Sd) J.V.Mascarenhas.

Bethamangala,
17-8-18.

,,,,,,,,,,,,,,,,,

" TRUE COPY "

Superintending Engineer,
Southern Circle.

TVR/23-8-18.

Encld B 83-17-Secy

Statement of villages existing on both sides of the river Palar between Holali and Bethamangala.

MYSORE P. W. D.

- - - - -

| | |
|---|---|
| Angathattahalli. ✓ | Kodihalli. ✓ |
| Nellore. ✓ | Hulkur. ✓ |
| Thimmasandra. ✓ | Angalam ✓ |
| Iyapalli. | Natha. ✓ |
| Jayamangala. ✓ | Chinnapalli. ✓ |
| Thambarpalli. ✓ | Minejenahalli. ✓ |
| Chiyandahalli. ✓ | Putteri. ✓ |
| Siresandra. ✓ | Kela Holali. |
| Holali. ✓ | Kourganhalli. ✓ |
| Woddapalli ✓ | Kottur ✓ |
| Muddunayakanhalli. ✓ | Jodikottur. ✓ |

This list includes (1) Iyapalli + (2) Kela Holali and Bethamangala Old

,,,,,,,,,,,,,,,

" C OP Y "

Superintending Engineer,

Southern Circle.

TVR/23-8-18.

Encl to LB 83-17-20

D.O. No. 60 dated the 15/17th April 1918, from the Executive Engineer, Kolar Division, to the Executive Engineer, Water Supply Division, Bangalore.

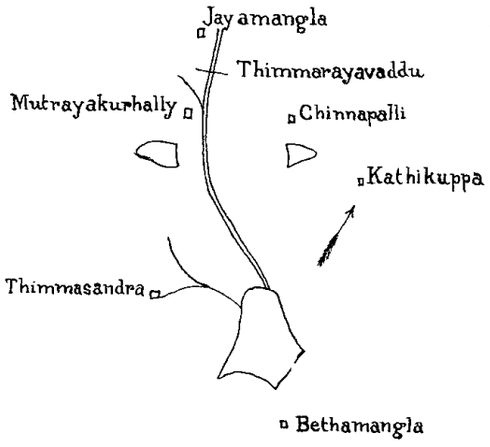
========

I am in receipt of your D.O. dated the 8th April 1918, requesting me to send you information about Thimmaraja Vaddu. The Chief Medical Officer of the Kolar Gold Fields has also written to me on the subject.

(2) As you are aware, wet cultivation under Bethamangala and Holali tanks was stopped and these tanks reserved for the Kolar Gold Fields Water Supply. The land-holders under Holali tank submitted a petition to the Chief Engineer requesting that Thimmaraja Vaddu, an old breached tank -- across Palar and above Bethamangala, may be restored and lands given under it for wet cultivation in place of wet lands stopped under Holali. The Chief Engineer called for a report from this Division and I reported that as valuable jodi lands of Jayamangala and Minjenhalli get submerged and it was very costly to restore the breached tank, unless the petitioner came forward with liberal contribution, the restoration work cannot be taken up. The project I estimated, would cost about Rs.70,000/- to restore 250 to 300 units of water.

I suggested Mr.Bhore when I met him at Kolar Gold Fields on the 14th of ~~of~~ last month, as to why the question of restoration of this tank should not be taken up if the Mining people want all cultivation on both tanks of Palar between Bethamangala and Holali to be stopped The breached tank is

is situated across Palar about 4 miles above Bethamangala and between the villages of Chinpalli and Mudinayakanhalli and you can find this on topo sheet. For reference, please see marginal sketch.




My own impression is that if this tank is -- restored we may limit the stopping of cultivation between Bethamangala and this tank in lieu of stopping it up to Holali.

This new tank may be reserved for water supply of Kolar Gold Fields in lieu of Holali.

(3) Wet cultivation under Holali tank may in this case be allowed and revenue increased.

(4) The important Jodidar under Holali tank told me that he was prepared to refund to Government all the amount paid to these land-holders as compensation when wet cultivation was stopped. This amount I expect will be about 10,000. This Jodidar owns about ½ to 2/3 of the lands under Holali and I feel he can be made to contribute at least another 5,000.

(5) The difficulties of the ryots who will be deprived of their livelihood if cultivation be stopped will be minimised as this new tank will be situated about midway (more towards Bethamangala) between Bethamangala and Holali.

I am not aware of the capacity of Holali tank but as the sites or waste weir at this new tank site are good, water even up to 500 units if necessary may be stored, provided the cost is out of question.

Enc to dl B83-17
8l25

Letter No.6942 dated Bangalore, 10th August 1918, from the Superintending Engineer, Northern Circle to the Chief Engineer of Mysore, Bangalore.

---

With reference to correspondence ending with your No.8674 dated 20th July 1918 in connection with proposales of the Executive Engineer, Kolar Division, for increasing the mileage allotment of certain roads, on the representation of the Kolar Gold Fields Mining Board to the Second Member of the Council in March 1918 that "(1) Bethamangala Road (11) Bowringpet to Kolar Road (111) Big Aladamara Ghaut tree to Bowringpet, may receive greater attention," I have the honour to inform you that special repair estimates for these roads were sanctioned by me last year (1917-18) as detailed below, and materials have been collected as per these estimates, and are ready at site for being spread and consolidated this rainy season:-

(a) Mulbagal Railway Feeder Road, i.e., Bethamangala Road 4½ miles long from Kolar Gold Fields to Bethamangala.....Rs.1,516/-

(b) Cuddappah Road Railway Feeder for the portions between Bowringpet to Kolar..... 672/-

(c) Kolar Gold Mining Railway Feeder Road.....1,331/-

and (d) Balaghat Marikuppam Road running in Kolar Gold Fields.....1,104/-

2. Omitting the Cuddappah Road Railway Feeder, the increased grant for which XXX will be dealt with in a separate report along with the other Provincial Fund Roads in the Circle, for which increased grants are also necessary, the question of increasing the grant for the other three roads will be considered in this letter.

3. A tracing from the Topo Sheets Nos.46 and 66 (Enc. No.1) showing the above mentioned roads is attached for kind perusal.

(a) Kolar Gold Mines Railway Feeder runs for a length of 17 miles from Bowringpet to Kamasamudram Railway Station, via,

Nandidrug, Ureegum Champion Reefs and Marikuppam, and from this main road, cross and loop roads are taken and the total length of these roads is 30¾ miles. The grant for this road was increased from Rs.400 to Rs.450 per mile from 1915-16, as per G.O. No.1669-72 P.W.8619-22 dated 4th September 1915, viz., from Rs.12,300 to Rs. 13,837. It may be mentioned that, in the first 11 miles of the main road, i.e., from Bowringpet to Marikuppam, there is very heavy traffic, as also in the cross and loop roads. The last 6 miles of road from Marikuppam to Kamasamudram Railway Station is not much used now by the Mining people.

(b) Balaghat-Marikuppam Road which was opened subsequently and which runs also in the Kolar Gold Mining area, between E and F as shown in the tracing enclosed, and consequently has got heavy traffic, is (6 miles in length, and runs from Coromandal Railway Station (or Balaghat Statio-n) to Marikuppam, and joins the main road near 11th mile. It has got a grant of only Rs.300 per mile or Rs.1,800 for the whole road.

(c) Mulbagal Railway Feeder Road which runs from Krishnarajpur Cooly lines (4/7th mile, to Bethamangala 11th mile between C to D as shown in the tracing attached) for a length of 4½ miles has got a grant of only Rs.300 per mile or Rs.1,350/- for its annual maintenance This road is also much used by the Mining people.

(d) Thus the above 3 roads are being maintained now at a cost of Rs.16,987/- a year as detailed below:-

| | Miles. | Grant per mile | Total Grant. |
|---|---|---|---|
| Kolar Gold Mines Railway Feeder and Loop Roads. | 30¾ | 450 | 13,837 |
| Balghat-Marikuppam Road. | 6 | 300 | 1,800 |
| Mulbagal Railway Feeder Road. | 4½ | 300 | 1,350 |
| Total | 41¼ miles- | Rs..... | 16,987 |

4. The present designation and distribution of the above 3 roads are rather confusing. I beg to to propose that the 41¼ miles length may be distributed and designated thus:-

(1) Bowringpet-Bethamangala Road.....11 miles.

(ii) Kolar Gold Mines Roads, (lying South, between Bethamangala Road and Marikuppam)..... 24¼ miles.

Statement showing the present and proposed distribution, designation and grants of the roads.

| Present | | | | Proposed. | | | |
|---|---|---|---|---|---|---|---|
| No. | Designation of roads. | Length | Grant per mile. | Total. | Designation of roads | Length | Grant per mile. | Total grant. |
| 1. | Kolar Gold Fields Road | 30¾ | 450 | 13,837 | Kolar Gold Fields Road | 24¼ | 600 | 14,550 |
| 2. | Balaghat-Marikuppam Road. | 6 | 300 | 1,800 | Marikuppam Kamasamudrum Road. | 6 | 250 | 1,500 |
| 3. | Mulbagal Railway Feeder Road | 4⅛ | 300 | 1,350 | Bowringpet Bethamangala Road. | 11 | 450 | 4,950 |
| | Total | 41¼ miles-Rs.16.987 | | | | 41¼ miles-Rs.21,000 | | |

Net increased grant to be sanctioned...Rs.4,013/-

K.N.

Data for metalled road in Kolar Gold Fields area.

Supposing that 1 furlong of the road has to be recoated once in 5 years in each mile, for special recoat, with an average lead of 3 miles for metal and average lead of 2 miles for gravel.

Collection for special recoating 70 Cyds of metal

FOR a furlong----for $1\frac{3}{5}$ x 70 = 112 Cyds

for petty 10 x $6\frac{2}{5}$ = 64 Cyds

Total 176 @ Rs.3-0-0 (including rate of lead).....528-0-0

Gravel for special...20 x $1\frac{3}{5}$ = 30 Cyds.

For petty.....$6\frac{2}{5}$ x 5 = 32 Cyds.

Total 62 @ 1-8-0 (including rate of lead)..... 93-0-0

Spreading metal, including watering and consolidation..176 @0-6-0, (including steam road roller consolidation)..... 66-0-0

----------do---------gravel...62 @ 0-4-0..... 15-8-0

Picking the road surface...176 x 12 x $\frac{1}{4}$ average 33-0-0

Ordinary Maintenance, such as clearing side, and check drain..... 25-0-0

Repairs to Bridges and drains..... 25-0-0

Total Rs.785-8-0

Every bit is presumed to be recoated once in 5 years at least and hence in calculation $1\frac{3}{5}$ furlong is taken into account for each year.

K.N

------:0:-----

obtained from Ch. Sec.'s Office 21/12/48

Letter No. 6751/Gl.(351-18) dated the 23rd August 1918, from the Superintending Engineer, Southern Circle. to the Chief Engineer of Mysore, Bangalore.

---

Reference:-

Chief Engineer's No. 4719 dated 15th April 1918, forwarding extract (item No. 6, regarding the Kolar Gold Fields Water Supply) from the responsibility sheet in respect of the question referred to in the notes of the discussion by the 2nd Member of -- Council with the Kolar Gold Fields Mining Board, and calling for a report on the representations therein contained together with my - recommendations.

---

In reference to the above, I have the honor to report as -- follows:-

The representations referred to in the note are:-

(a) A more satisfactory arrangement for looking after the pump and filters.

(b) Constituting the villages, into a Sanitary area and -- supplying those villages with wells.

(c) Appointing a Committee consisting of the Government - - Medical Officer, Kolar, Medical Officer of Health, - - Kolar Gold Fields and Executive Engineer in-charge of the Water Works, to periodically inspect the tank and the works, say, once a quarter, and make a report to Government, after examination of the supply bacteriologically.

(d) Further investigation regarding the ultra violet rays as well as the Thimmarayavoddu scheme and increasing

the capacity of the coagulating tank.

(e) Renewal of the pump which as agreed by Mr. Bhore is not working satisfactorily, even after repairs; at a cost of Rs. 2,000.

(f) The supply of better alum.

2. As regards (a) the supervision of the Bethamangala plant is satisfactory. The report of the Expert from Messrs. Worthington Simpson Ltd., goes to show that the machinery at the Pumping Station is well looked after and timely repairs are carried out -- when there is necessity for these. The pumps are now working satisfactorily, the slip in them having been reduced to less -- than 5% resulting in a saving of 2 to 3 tons of fuel a day - The filters have had all their drain pipes renewed at a considerable cost and the sand has been removed and thoroughly cleaned The plant at the Pumping Station is now working satisfactorily and I do not think there is any necessity for special arrangements for looking after the plant. It will be sufficient if -- the Committee now proposed for the periodical inspection of the Kolar Gold Fields Water Supply submit their report once a --- quarter.

3. As regards (b) the Sanitary Commissioner in his letter No. G.C.357 dated 2nd February 1918 deals with this question in para 6 of the letter. This therefore requires no comment from me.

4. As regards (c) a Committee has been framed for carrying out periodical inspections. The Members constituting this Committee are:-

(1) The Executive Engineer, Water Supply Division (Convener

(2) The Health Officer, Kolar Gold Fields, and

(3) The District Sanitary Officer, Kolar District.

The Committee met at Bethamangala on the 17th August 1918 and a copy of the proceedings of the Meeting ~~are~~ is herewith submitted. The rules proposed, appear to me to be rather drastic,

but in the interests of the Water Supply, they should be adopted.

5. As regards (d) I am informed by Mr. Forbes, Chief Electrical Engineer that he is in communication with the manufacturers in America and will report to Government in due course. I may add here that the Jewell Filter people consider it unnecessary to sterilise the filtered water, and as the results both in Bangalore and Mysore have so far been satisfactory, it may be considered if this treatment should be adopted for Kolar Gold Fields; as the filters are working satisfactorily and this they will do under the safe-guards now contemplated.

However this is a point to be settled by Government.

6. The Thimmarayavoddu scheme has been gone into by Mr. Karve, Executive Engineer, Kolar Division. It will be seen from his note, copy of which is herein enclosed, that the restoration of this tank will not be of much use It will act only as a settling tank for all the contamination from the wet cultivation above At present there is only a narrow belt of cultivation on either side of the river, but if the proposed tank is constructed and cultivation allowed below Holhalli, there will perhaps be a larger area. The cost of the project is also stated to be prohibitive I therefore am of opinion that this scheme need not be considered.

7. The question of increasing the capacity of the coagulating tank has been gone into minutely by the Sanitary Commissioner. For reasons given in para 3 of the Sanitary Commissioner's letter referred to above, I consider it unnecessary to increase the capacity of the tank. The Jewell Filter Expert is also of this opinion.

8. As regards (e) the washing of the filters was not wholly satisfactory owing to insufficiency of wash water. It is possible that our Pelton wheel and wash pump were not delivering the same quantity of wash water as originally delivered and therefore this would account for the results not being very satisfactory. A certain amount is now taken from the rising main to

supplement the wash water. The result is satisfactory. This contingency was originally provided for in the Plant and the -- result is now satisfactory. I therefore think that it is now not necessary to purchase a new pump.

9. Finally as regards (f), I have to report that the alum we were able to procure this year is of good quality, containing 16.8% of alumina.

10. In conclusion, I beg to say that the precautions proposed to be adopted to safeguard the water against contamination and the improvement effected in the pumping and Filtering plant -- should be sufficient guarantee of a good water supply to the - Gold Fields.

I regret the delay in the submission of this report. It is partly due to the time taken in experimenting with the wash pump and studying the results of these experiments and partly - due to my indifferent state of health during the whole of July. I hope the delay will be overlooked.

---

"One Copy"

R W Hennessy

Deputy Chief Engineer of Mysore.

E.W.M.

Rules for the periodical inspection of Bethamangala Water Supply.

1. The following officers will constitute the Committee for the periodical inspection of the Bethamangala Water Supply.

(a) The Executive Engineer, Water Supply Division. (Convenor)
(b) The Health Officer, Kolar Gold Fields, and
(c) The District Sanitary Officer, Kolar District.

2. The Committee should inspect the Bethamangala Water Works not less than once every three months, the date of visit being previously intimated to the Superintendent of the Water Works or other authority concerned.

3. The condition of sanitation in the villages on the Palar River constituted into a special area for purposes of safe-guarding the purity of the water supply may also be inspected by the Committee as a part of the prescribed - periodical inspections.

4. The Committee should examine the records of the Jewel Filters to see whether the results of bacteriological -- examination have been uniformly satisfactory and in case the periodical analysis, chemical as well as bacteriological, reveal shortcomings in the standard of purity, should endeavour to trace what the causes are that contribute thereto.

5. The alum should be examined to see if it is of the approved quality and is added in correct quantities.

6. The following items should also be noticed by the Committee.

(a) regulation of the rate of filtration and
(b) leakages, if any, in the main and service pipes -

— Telegraphic Address —
STATEWORKS.

30 SEP 1918

MYSORE PUBLIC WORKS DEPARTMENT,
CENTRAL OFFICE,

*Bangalore*, 26th September 191 8

No. B. 11589
Encl one

From S. Cadambi, Esq.,
~~Rao Bahadur K. Krishnamachariar, Esq., B.A., B.L.~~,
*Chief Engineer for Irrigation,*
*BANGALORE.*

To
B. Ramaswamaiya, Esq., B.A., B.L.,
Secretary to the Government of Mysore,
Revenue Department, Bangalore.

Sir,

In continuation of this office No.10430 dated the 28th August 1918, I have the honour to forward herewith for your information a copy of letter No.B.Dis.21 dated the 12th September 1918 received from the Sanitary Commissioner in Mysore stating that for reasons given therein the question of renewing the sand in the filters at Bethamangala may be deferred for a year.

2. The Superintending Engineer, Southern Circle, has been requested to submit a report on the purity of the water supply after a year.

I have the honour to be,
Sir,
Your most obedient servant,

R V Sundaramma,
For Chief Engineer for Irrigation.

J.R

Enclosure B 83-5, 26

Letter No.B.Dis.21 dated 12th September 1918 from the Sanitary Commissioner in Mysore, to the Chief Engineer for Irrigation, Bangalore.

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In reply to your letter No.10429, dated the 28th ultimo, I have the honour to state that, in view of the satisfactory reports being received of late of the results of the bactericlogical analyses of the Hethanagala filtered waters, the question of renewing the sand in the filters may be deferred for a year to confirm the present expectation that the standard of purity of water will be maintained at a uniform level.

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True Copy

K P Narayanaswamy Asst

Assistant Secretary to Government.

Public Works Department.

J.R

G. R. S. V1—G/32]

SUBJECT.....

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*Diary No. of letter replied to*... 4892

GENERAL AND REVENUE SECRETARIAT

( )

*, the* *191*

*Date of issue* 6.3.19

*Signed by* for S. T. Kesava Iyer

**Section** AB

**File No.** 83-17

**Serial No.** 34

No. 11234 4.3.19

To

The Chief Engineer for Irrigation

Bangalore

Sir,

With reference to the correspondence ending with your letter no. B. 11589 dated 26-9-18 stating that the supervision of the Bathamangala Plant is satisfactory and that the question of renewing the sand in the filters at Bathamangala may

over.

157

be deferred for a year

I am directed to request

you to be so good as to arrange for

a monthly inspection of the

pumps and filters - by the

Sanitary and Superintending

Engineers. ~~and for a report~~

being transmitted to Govt

~~in course of the results of~~

~~their inspection~~

5 Mar

I have &c

1.3.19

for Secy to Govt

Rev Dept

27/2/19

*Inst of enclosures.*

*Copied by*

*Examined by*

D13550
28.4-19

Telegraphic Address: *Stateworks*

No. B.48583 R3-17-39

MYSORE P. W. DEPARTMENT.

CENTRAL OFFICE.

Received 24 APR 19

*Bangalore*, 15 April 1919.

*From*

S. Cadambi, Esq.,
Chief Engineer of Mysore,
*Public Works Department*, Bangalore.

67182

*To*

Put up refs
MM
27/4

B. Ramaswamaiya, Esq., B.A., B.L.,
Secretary to the Government of Mysore.
Revenue Department, B a n g a l o r e.

Sir,

With reference to your letter No.11234/L.B.83-17-34 dated the 4th March 1919. requesting that a monthly inspection be arranged for of the pumps and filters of the Kolar Gold Fields Water Works, by the Sanitary and Superintending Engineers, I have the honour to inform you that the Gold Fields Water Supply is under the control of the Executive Engineer Water Supply Division, and not of the Sanitary Division. I request to be informed whether it is the intention of Government that both the Superintending Engineer and the Executive Engineer Water Supply Division should inspect jointly the pumps and filters or the Executive Engineer and the Sanitary Commissioner with Government.

2. A copy of an inspection report recently received from the Sanitary Commissioner on the filters etc, of the Gold Fields water Supply, has been forwarded to the Executive Engineer, Water Supply Division, for needful action taken. The result of the action will be reported in due course.

I have the honour to be,
S i r,
Your most obedient servant,
RKundaraman
For Chief Engineer of Mysore.

J.R

Telegraphic Address: *Stateworks*

D13890 6.5.19

dLB 83-17-4c

No. E. 5924 Encl

MYSORE P. W. DEPARTMENT.

CENTRAL OFFICE.

*Bangalore,* 1st May 191 9.

MAY 1919

685[illegible]

*From*

S. CADAMBI, ESQUIRE,
~~KARPUR SHRINIVASRAO, Esq., B.Sc., LL.B.,~~
Chief Engineer of Mysore,
~~*Secretary to the Government of Mysore,*~~
*Public Works Department.*

*To*

B. RAMASWAMAIYYA, ESQ., B.A., B.L.,
Secretary to Government,
Revenue Department,
BANGALORE.

Sir,

With reference to your letter No. 11234/L.B.83-17-34 dated the 4th March 1919, I have the honor to forward herewith a copy of letter No. 3605 dated the 17th April 1919 received from the Superintending Enginer, Southern Circle, regarding the pumps at Bethamangala.

I have the honor to be,

Sir,

Your most obedient servant,

FOR CHIEF ENGINEER OF MYSORE.

E.W.M/30-4

Enc to LB 8317-40

Letter No. 3605 dated the 17th April 1919, from the Superintending Engineer, Southern Circle, to the Chief Engineer of Mysore, Bangalore.

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Chief Engineer's No. B.3964 dated the 28th March 1919 in - re. arrangements to inspect the pumps at Bethamangala and submit a report by the 10th of April 1919

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In reference to the above, I have the honor to report - - that I inspected the pumping station at Bethamangala on the 29th of March last.

2. The water level of the lake was 45'-6".

3. Arrangements for subsidiary pumping will have to be made - and the Executive Engineer. Water Supply Division, has been instructed to submit proposals at once.

4. The pure water flume which is now covered by wooden planks requires to be made dust proof and instructins have been given to provide a tin lining over the wooden planks.

5. The filter sand may now be renewed and the Executive Engineer has been asked to submit an estimate for this at an early date.

6. Instructions have ben given to the Superintendent to clear all weeds near the intake.

7. The pumps, engines and filters were in good working order and the whole station looks neat and tidy. The analysis of the filtered water has been satisfactory.

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"C O P Y"

ASSISTANT SECRETARY TO GOVERNMENT,
PUBLIC WORKS DEPARTMENT

E.W.M/30-4.